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ORIGINAL LECTURES.

THE ADDRESS IN OBSTETRICS.

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ADDRESSING myself directly to the present study I propose, not a catalogue of the chief, still less of the numerous articles pertaining to obstetrics and diseases of women published within the year, but a brief presentation of a few of the more important subjects relating to these departments, considered within that time.

ELECTRICITY IN OBSTETRICS AND IN DISEASES OF WOMEN.

The induction of premature labor¹ by the constant current has been tried in seven cases by Brühl, and the results show that this means has a very limited application. It may entirely fail in exciting uterine activity, and even where this effect is produced it must usually be supplemented by other means to cause complete dilatation of the os uteri; moreover, the effect is only secured by several applications.

A very distinguished authority in therapeutics² has recently suggested that post-partum hemorrhage should be treated by the faradic current instead of by ergot, friction of the abdominal walls, and other reflex stimuli intended to secure uterine contraction. The suggestion is a valuable one, and yet few obstetricians have the necessary apparatus at hand; and even if they had, probably most cases of post-partum hemorrhage would be arrested by compression of the uterus, and by evoking its contraction by means of the hand and by hot water injections, before an application of faradism could be made.

Electricity for the destruction of the life of the foetus in ectopic gestation was first tried by Bachetti, in 1857, and the experiment was successful. The operator employed two needles, penetrating the cyst, and connected with an electro-magnetic apparatus; it may be questioned whether the double puncture of the gestation cyst was not the efficient agent. To Dr. J. G. Allen, of Philadelphia, is due the credit of having first successfully used the faradic current for this purpose—this was in 1869—and he thus originated what may be justly termed the American method of treating this grave condition. Several successful cases have since been reported, some of them in the practice of very eminent American obstetricians, such as Thomas, Reeve, and Garrigues, in which Dr. Allen's method was employed. The most

recent of these cases was reported by Dr. Van de Warker at the last meeting of the American Gynecological Society. So far, I believe, no fatal result to the mother has occurred when the interrupted current was used. Such fortunate exemption has not always followed the employment of the constant current. Dr. Janvrin, in 1866, reported a case of death, and last year a like result occurred in the practice of Dr. Percy Boulton.¹ The patient of the latter was supposed to be about eight weeks pregnant, three needles were passed into the tumor, and their ends, projecting from the vulva, were connected with the positive electrode of a thirty-cell battery, and a flat sponge connected with the negative pole was put upon the thigh, being moved about from place to place during the six minutes the current was applied. The woman died twenty days after. It is somewhat remarkable that the electrolytic treatment of extrauterine pregnancy is attributed by the author to American physicians; and he states that in a future case he would prefer applying the faradic current, a conclusion he might have reached without his sad experience with electrolysis, had he read the usual practice successfully pursued in this country.

But surely the day is coming, if not already here, when an extrauterine pregnancy, as soon as recognized, will be treated by abdominal section. The brilliant results which Mr. Tait has had in operating immediately after rupture of the gestation cyst in such cases, has opened the way for this important advance. In this city there have been within a year at least two successful operations, one by Dr. Joseph Price, and the other by Dr. Charles B. Penrose, made early in extrauterine gestation and prior to the rupture of the cyst.

Apostoli² has recently reported a case of hydrosalpinx successfully treated by the galvanic current. Two applications were made at an interval of thirteen days, the strength of the current at the first being one hundred and at the second one hundred and forty milliampères; the current was continued for five minutes at each sitting, a steel capillary trocar the size of a needle of Pravaz's syringe was thrust the distance of one centimetre into the most prominent part of the swelling in the vagina, and connected with the negative pole, while the positive pole was connected with his well-known application to the abdominal wall. Apostoli claims that galvanopuncture is a valuable means, accomplishing a double object in such cases: 1. It aborts a phlegmasia in the beginning and arrests an inflammatory process; 2, it permits ready evacuation of a fluid in consequence of the separation of the resulting slough, provided this cyst is united to the vaginal cul-de-sac.

But it must be obvious that such method of evacuating a pelvic serous collection, no matter whether tubal, or in the connective tissues, or peritoneal, has nothing to com-

¹ Arch. f. Gynäkol.

² Address in Medicine before the American Medical Association, by Dr. Bartholow.

¹ British Medical Journal.

² Nouv. Arch. d'Obstet. et de Gynécol., February, 1888.

mend it over the aspiration advised by Hardon in the early stage of inflammation of the connective tissue, or the incision and drainage employed by Laroyenne and Blanc.¹ Some of the cases reported by Blanc in his interesting monograph were believed by him to be hydrosalpinx. Let me turn aside for one minute to refer to Dr. Hardon's method of treating so-called pelvic cellulitis. In such inflammation he states that the first stage, that of serous infiltration, lasts usually not more than forty-eight hours, and believing that the inflammation may be aborted by removing this serum, he introduces an aspirator needle into the inflamed tissue, and withdraws all the fluid he can, when a puncture is made at another point and suction employed, and thus the process repeated at other parts of the tumor. He asserts that by this practice the pain is relieved, the fever ceases, and rapid convalescence follows. Certainly the results he has had speak strongly in favor of his method.

Returning from this digression, in the electrical department of the diseases of women in the Jefferson Medical College Hospital,² some very satisfactory results have been had from the use of the interrupted, and of the constant current. Thus, one patient suffering with cervical stenosis and anteversion, and very painful menstruation, was cured by faradism; previously dilatation, while the patient was anesthetized, was twice resorted to, once by myself, with only temporary benefit. Within the last five months cases of retroflexion, subinvolution, and old inflammatory deposits in the connective tissue adjacent to the uterus have been treated by the constant current, all of them being relieved, and some of them permanently cured; the strength of the current employed in these cases was ten to twenty-one milliamperes, and it was continued for ten minutes, the application was made once in three or four days.

But probably the most important contributions to the use of electricity in diseases of women are those relating to the treatment of uterine fibroids by the methods advised by Apostoli. Foremost among these contributions must be placed Apostoli's, presented at the last meeting of the British Medical Association, and published in the *British Medical Journal* of October 1, 1887. In that paper the distinguished author states that from July, 1882, to July, 1887, he has had under his care 273 patients with fibromata or hypertrophy of the uterus in some manifest degree, and upon these he has used 4246 applications of the continuous current of electricity. In 95 per cent. of the cases in which his advice was fully acted upon, permanent benefit resulted. Keith, Sir Spencer Wells, and Playfair have visited Apostoli at Paris, and after carefully studying his method and its results, have become convinced of its value. Surely their course is to be commended rather than that of a London surgeon who condemns without personal investigation, and declares that he has never tried the Apostoli method, and being a surgeon, does not intend to, thinking it may be more properly left to the obstetric physician. Mr. Keith,³ writing in December, 1887, states "that hysterectomy is an operation that has done more harm than good, and its mortality is out of all proportion to the benefits received

by the few." He further states, "I have never been in favor of hysterectomy, simply because its death-rate is so high, and because it is performed for the removal of a tumor that rarely kills. So strongly do I now feel upon the subject that I would consider myself guilty of a criminal act were I to advise any patient to run the risk of her life—and such a risk—before having given a fair trial to this treatment"—that is, the electrical—"even were I sure that the mortality would not be greater than that which hysterectomy has given me in my private cases—under 4 per cent." At the time this was written he and his son had, within five months, applied electricity "in strong, accurately measured doses" in 100 cases chiefly of fibroid tumors, the number of applications being more than 1200; the results were very encouraging. More recently Skene Keith⁴ has reported 7 cases of uterine fibroids thus treated.

Steaenson, though less enthusiastic than Apostoli, or even than Keith, uses the following language:⁵ "I do not think that the electrolytic treatment will supplant the necessity for abdominal section or removal of the uterine appendages in such cases as those in which these operations would be appropriate, but I do think that in the use of electricity we have a means of treating fibroid tumors which is superior to any we have formerly employed, short of their entire removal. I have treated a large number of cases, and in nearly all the symptoms have been removed, in many the tumors have decreased in size, and in some the decrease has been considerable." Dr. A. Victoria Scott⁶ states, as the result of her experience, that the symptoms of pain and hemorrhage cease, that the general health is improved, and that in all cases treated for a period of two months or longer, there has been a sensible diminution in the size of the tumors. Dr. Franklin H. Martin, in a paper presented at the last International Congress, claimed that the Apostoli treatment is free from danger, is painless, stops hemorrhages, diminishes the tumors, and alleviates neuralgic pains. Villa, on the other hand, gives scant commendation to the method; among other things adverse to the electrotherapeutic treatment, stating that many of the patients thus treated for a long time by different physicians, among these Dr. Apostoli, have claimed the radical operation. It might be added, Apostoli frankly says that seven patients of his did leave him to have hysterectomy done, and that they are all dead.

I think, in considering the various testimonies that have been given upon the subject, we may safely adopt the words of Aveling,⁷ always temperate, and usually wise in his utterances: "If electricity relieves pain, hemorrhage, and bulk of tumor, the three urgent symptoms for which hysterectomy is performed, and the patient is thus symptomatically cured, is it not worth trying?"

PUERPERAL ECLAMPSIA.

Puerperal eclampsia has occupied no inconsiderable space in the periodical professional literature of the past year, but probably no very important contributions have been made to the etiology or to the therapeutics of the

¹ Atlanta Medical and Surgical Journal. De l'Inflammation Peri-uterine Chronique, Paris, 1887.

² This department is conducted by Drs. Davis and Scholl, to the latter of whom I am indebted for the above statements.

³ British Medical Journal, December 10, 1887.

⁴ Edinburgh Medical Journal, February, 1888.

⁵ British Med. Journal, May 12, 1888.

⁶ American Journal of Obstetrics, March, 1888.

⁷ Nouv. Arch. d'Obstet. et de Gynéc., Jan. 1888.

⁸ British Med. Journal, April 14, 1888.

disease. In regard to the former, the theory so ingeniously and ably urged by Dr. King, has not been generally accepted. According to this theory, "disturbances in the renal circulation are produced chiefly by pressure of the gravid uterus upon the abdominal aorta or its branches, or upon the vena cava or its branches, or upon both or all of them, in consequence of the child and womb not maintaining during pregnancy their normal lateral obliquity above the pelvic brim." The theory fails to explain the occurrence of eclampsia early in pregnancy, and the increased liability from great distention of the uterus, as in plural pregnancy. Moreover, if descent of the foetal head into the pelvic cavity in the latter weeks of pregnancy, which is the rule in primigravidae, causes the interference with the circulation referred to, the disease ought to be much more frequent. A Dublin obstetrician, some fifty years ago, stated that there was little danger of eclampsia if the foetal head did not present. Since cephalic presentations vastly predominate over all others, the importance of this observation is quite plain.

While in the great majority of cases of eclampsia albuminuria is present and has preceded the attack, there still remain a large number in which there is no renal disorder, and these are properly termed reflex, the primary source of irritation being in most instances uterine, though in some it may be vesical; for example, the bladder being distended with urine; such source of convulsions was long ago pointed out by La Motte and by Portal.

A very interesting fact is stated by Herman¹ as to the difference between the albumin escaping in the urine in eclampsia, and in Bright's disease; in the former it is mainly paraglobulin, and in the latter serum-albumin.

So far as therapeutic means are concerned, in addition to those with which the profession is so generally familiar, such as bleeding, chloroform, chloral, and morphia, abroad many practitioners have successfully employed pilocarpine, and in this country veratrum viride was strongly advocated both at the International Medical Congress, and at the American Gynecological Society. In referring to the value of the latter remedy, as claimed by American practitioners, a writer in a British medical journal² rather ungraciously remarks: "To prevent disappointment, however, it is right to say that American women appear to respond to drug treatment more readily and certainly than English women."

Some cases of eclampsia treated by inhalation of oxygen have been reported last year, but the results do not seem to establish for this remedy an important position.

THE TREATMENT OF PLACENTA PRÆVIA.

The treatment of placenta prævia is still a subject of no little discussion, obstetricians not having yet adopted by common consent one method as the best, probably because there is no such single way to be followed to the exclusion of every other. Dr. Barnes, very justly as I think, condemns some of the methods employed as disregarding the life of the foetus. The craniotomists as opposed to the Cæsareans, occasionally refer to the sentimentalism of the latter, when they urge their favorite

operation on the ground of saving the life of the child, even though the mother should run a greater risk than if it were sacrificed. But a similar manifestation of feeling seems to be forgotten by some in their mode of treating cases when the placenta is prævia. Le Page, for example, says: "The chances for the child's life, I therefore contend, should not be a factor in the treatment." The same opinion has been avowed in more than one of our American medical societies.

In what has been termed the recent method of treating placenta prævia, that is by bimanual podalic version, as advocated especially by Lomer, Hofmeier, and Behm, the foetal mortality has been very great, that of the last reaching 83.4 per cent. Of course, the mortality is still greater, if we adopt the rule laid down by Le Page: "At whatever period of utero-gestation after mid-term we become aware of the existence of placenta prævia, we shall serve the best interest of our patient if we at once bring to a conclusion a condition of things fraught with the utmost danger." Yet in the same paper the author states: "Hemorrhage during parturition is not inevitable, nor does loss of blood invariably take place during gestation." The last statement evidently condemns the one immediately preceding, as an invariable rule of practice. I do not believe the majority of obstetric authorities claim that in all cases of placenta prævia the pregnancy must be at once ended; certainly Churchill, Depaul, and Spiegelberg did not so teach. Following such teaching, and that of others equally famous, as well as the light of experience and sound reason, as I believe, I said in my work upon obstetrics, referring to the management of cases of placenta prævia in pregnancy: "If loss of blood be slight, and especially if the foetus be not yet viable, the expectant plan is indicated." One gentleman, for whose obstetric knowledge and ability I have the highest respect, exclaims: There is no expectant treatment of placenta prævia. And another gentleman, discussing the question in a medical society, and doubtless never having read what I did say, charges me with absolute advocacy of expectant treatment, not specifying the conditions in which it was advised, and graciously attributes such recommendation to my ignorance. By those words as first uttered I still stand, insisting that we have no right to sacrifice the life of the child when the mother's is not in jeopardy. But should the hemorrhage be serious, let the pregnancy be ended, whether the child is viable or not. Further, after that viability has been reached, if the placenta be deeply situated, whether the implantation be central or only lateral, the induction of premature labor is indicated, furnishing not only the best security for the mother's, but also the best chance for the child's life. My advocacy of this practice dates many years back. Thanks to the couveuse and gavage, the time when the foetus becomes viable may now be placed in the seventh month, and not at its end, as has hitherto been done. Now in the great majority of cases of placenta prævia hemorrhage does not occur prior to this time; and, hence, there is in most cases a protection of the child's life until it is capable of continuing after delivery, should it escape the perils of birth. The question therefore is, How can delivery be effected so that there is a fair chance for the child's life without imperilling that of the mother? Zweifel,

¹ Transactions of the London Obstetrical Society for 1887.

² Birmingham Medical Review, January, 1888.

¹ Provincial Medical Journal, 1887; British Medical Journal, October, 1887.

recognizing the deplorable mortality, in regard of the fetus, attending podalic version as usually done, suggests that the obstetrician, instead of introducing his finger or two fingers on one side of the os, for the purpose of making version, should pass them anteriorly, for there they can enter the uterus further, and with less violence to the placental attachment, and thus a conservative influence be secured in reference to the child: this suggestion may be of value.

All of the three chief methods when labor is complicated by hemorrhage in placenta prævia, are essentially only different ways of applying a tampon; the bleeding is arrested by pressure from the vagina when the classic tampon is used; from the cervico-uterine canal either in case of the hydrostatic dilator, or in that of the drawn-down limb of the child; it is evident, from statistics, that the last method of tamponing is not the best for the life of the child. If we conjoin with the pressure from the hydrostatic dilators of Barnes, his method of partial detachment of the placenta—the physiological reasons for this have been so well presented by him that it is unnecessary, even if there were time, to call attention to them now—we probably have attained the best method of treating placenta prævia after labor has begun, and the vaginal portion disappeared, so far as the interests of both mother and child are concerned; the child's life is less imperilled, in part because prompt delivery can thus be effected. In some cases, probably the method of Dr. Davis, with which the members of the Society are familiar, and which has furnished such good results in his hands, could be well employed.

ANTISEPTICS IN OBSTETRIC PRACTICE.

The prophylactic employment of antiseptics in obstetric practice has justly occupied considerable attention during the past year. After this subject has been so much discussed, and its importance so strongly urged, and the value of these agents in lessening not only childbed mortality, but also childbed morbidity, especially in hospital practice and after instrumental deliveries, has been so conclusively demonstrated, the following statement,¹ made in one of our medical societies about a year ago, reads like an anachronism: "I have not taken pains to disinfect instruments to be used in obstetric practice, and have not had many cases of puerperal metritis."

Kascharoff² has devised a bath-tub, in which warm, sterilized water is placed, and the woman's hips and genitals are placed so that they are completely covered by the water during the performance of obstetric operations, and thus infection prevented. He recalls the fact that Aitken, an English obstetrician, in 1784, advised that the Cæsarean operation should be performed under water, believing that then it could be done with less risk than in contact with the air. Such an apparatus as Kascharoff's might possibly be used in hospitals, but could not be employed by the obstetrician in general practice; besides, there are more convenient ways of rendering obstetric operations aseptic.

In considering the prophylaxis of puerperal septicæmia at the last meeting of the British Medical Association, Playfair presented a series of rules for monthly nurses,

one of them being that the vagina of the puerpera should be syringed out twice a day with an antiseptic solution. Few obstetricians, no matter how firm believers in antiseptics, will accept this rule of practice; such injections, in case the condition of the woman is normal, are meddling, and may be mischievous.

The dangers from intrauterine injections in obstetric and in gynecological practice, have been the subject of recent study by Maginn.¹ So far as such dangers occur in the puerperal state, they may be guarded against by proper precautions. In the first place, obstetricians have used unnecessarily strong solutions of corrosive sublimate; probably a solution of 1 part of the salt to 5000 of water will meet the requirements of almost every case in which such injections are needed. Next, the solution should never be used cold, but either warm or hot. The injection must be made gently, and free exit of the fluid from the uterus secured. After the corrosive sublimate solution has been used, the uterus is to be washed out by water sterilized by boiling. Nevertheless, if there is a peculiar susceptibility to mercurial action, or in case of renal disease, the ordinary injection should be replaced by a solution of carbolic acid.

CÆSAREAN SECTION.

Probably no more important advance in obstetrics has been made within the last few years than in the method of performing the Cæsarean operation; what is now known as the improved operation has given results in Germany so satisfactory that possibly the day is at hand when craniotomy upon the living fetus will be very rarely performed, if done at all. If the promise of the hour is fulfilled, the operation will soon count as large a percentage of cures in this country as it has recently in Germany. In New York there have been four successful operations, all within a year, I believe, three of these done by Lusk, and one by Garrigues; in Philadelphia, Dr. Howard Kelly has recently had two successful cases; in Chicago one by Dr. Jaggard, in Toledo one, and in Baltimore one, have been successful.

I am indebted to Dr. Harris for the following table of all the Cæsarean operations done in the United States up to the present month:

Cæsarean operations in the United States	169
Old style	150
Singer method	19
Women saved under old operation	56
" " " Singer method	9
Operations in Philadelphia, old style, 6	Women saved, 2
" " " Porro, 2	" " 1
" " " Singer, 4	" " 2
Operations, 12	Recoveries, 5
Cæsarean operations in the United States in 1887	8
Women saved	4
Cæsarean operations in the United States in 1888 (5 mos.)	6
Women saved	3
Probably will recover	1
14 operations in 17 months.	6 women lost.
The last 15 Cæsarean operations in the United States, all	
Singer method but one (Dec. 16, 1887 to June 1, 1888)	
Saved, women	9
" children	12

¹ Detroit Lancet, October, 1887.

² Annales de Gynécologie, March, 1888.

¹ Nouvelles Archives d'Obstetrique et de Gynécologie.

GENERAL ADVANCES.

Did time permit, I would like to refer to some most important papers upon extra-uterine pregnancy, such as those of Breisky,¹ Werth,² Hart and Carter,³ and others; to the subject of puerperal septicæmia as considered by Barnes,⁴ Byers, Madden, and others, Runge,⁵ Leopold,⁶ and Galabin,⁷ and others; to the operative treatment of puerperal purulent collections in the abdomen, as presented by Besnier¹ and Baldy;⁸ to the complications of pregnancy by typhoid fever, to the use of ergot during or after labor, to the valuable lectures by Dr. Priestley on the "Pathology of Intra-uterine Death;" to the present status of Alexander's operation, an operation that receives little countenance even in England, and still less in Germany; to the cure of retroflexion of the uterus by substituting another malposition—that is, making it immobile by attachment to the abdominal wall—an operation suggested by Sims⁹ twenty years ago, and first performed by Koeberlé, in 1877, and an operation which, though now advocated by some brilliant surgeons, will probably not survive a score of years, but be consigned to "innocuous desuetude;" to the subject of hysterectomy for malignant disease, and various other topics.

A recent paper upon exploratory laparotomy by Dr. Baldy furnishes both instruction and warning. Dr. W. S. Stewart has devised an obstetric forceps with parallel branches; time only will test its value. Nevertheless such an instrument presents some advantages over the ordinary one with crossed branches, advantages which the Lyons school of obstetricians have especially urged, but which have not been generally recognized.

OVARIOTOMY AND SALPINGOTOMY.

Abdominal sections to remove the ovaries, or the tubes, or both, have been attended by so slight mortality in the hands of Battey, of that great master in abdominal surgery, Lawson Tait, not to mention other famous names at home or abroad, and in the practice of what I may call the Philadelphia Dispensary School of Surgeons, and the results of the operations have been in many cases so satisfactory, is there not great danger of such operations being too frequently performed, and are the specimens removed carefully examined by competent pathologists, who conclude that structural changes justify their removal? Nay, is there not danger that men without experience, without previous apprenticeship to a competent master, deceived by the glamour of brilliant statistics, and ambitious of fame as operators, will decide upon and perform these operations when there is no necessity for them, and no benefit follows them, or they are fatal? Sad stories of such events are occasionally whispered, and their warning against rash operations should be heeded. Reverdin¹⁰ has recently stated that castration

for nervous diseases ought never to be done unless the patient is examined while anesthetized, and the ovaries are found to have undergone structural change; it is added that among all the cases of castration of women for nervous diseases, very many have not resulted favorably. If this last statement be true in Paris, is it not probable it is also true in this country?

It cannot be denied that there is a growing belief in the professional mind that these operations are too frequently resorted to; and, therefore, their indications ought to be clearly established, and the presence of the latter conclusively demonstrated, before a woman is subjected to what otherwise is an odious mutilation which may have very injurious consequences, even if her life is not sacrificed in the operation. The dentist may pull a wrong tooth, but an artificial one can make good the loss; the surgeon may needlessly sacrifice a limb, but the mistake is not irreparable, for an artificial one may take its place. But there is no such substitution possible for ovaries unnecessarily removed—the loss is remediless—and, therefore, the greater heed necessary to prevent so grave, if not criminal, an error. Possibly there is a tendency on the part of some to underestimate the value of these organs, and bringing to their charge various pains and aches, either in them or elsewhere in the corporeal domain, in head or in toe, and functional misbehavior or mental disorder, or convulsive disease, try, convict, declare worthy of death, and execute with the rapidity characteristic of a court martial in war times. But is it a slight matter to deprive a woman of organs upon which her sex depends? I recall the words of the most brilliant of American obstetric teachers, the late Dr. Charles D. Meigs,¹ who in referring to woman, said: "Her ovary is her sex, and she is peculiar because of it, and in order that she might have this great, this dominant organ planted within the recesses of her body." I read in Maudsley,² when he speaks of the influence of the sexual organs in the development of the boy: "These evolutionary effects, that of the functional development of the reproductive organs upon the mind, do not take place when such development is prevented by their removal before puberty. The minds of eunuchs are mutilated like their bodies; they are said to be cowardly, envious, liars, utterly deceitful, destitute of social and moral feelings; with the deprivation of sexual feeling, they are deprived of all the mental growth and energy which it inspires directly or remotely. How much that is it would be hard to say; but were man deprived of the instinct of propagation, and of all that mentally springs from it, it is probable that most of the poetry, and perhaps all the moral feeling would be cut out of his life."

Now is it probable that a woman can have during the reproductive period of her life, in some instances the operation has been done quite early in that period, her ovaries removed without greater or less changes in her mental and moral condition? What those changes are have not yet been studied, save in a very superficial manner, and our knowledge will probably remain imperfect for many years. Peradventure, some of the pages of this scarcely opened book may be read in hospitals for the insane, in courts of justice, and by coroners' juries over the bodies of suicides.

¹ Wien. med. Woch.² Deut. med. Woch.³ Edinburgh Med. Journ., October, 1887.⁴ British Medical Journal, 1887.⁵ Arch. f. Gynäköl.⁶ Centralblatt f. Gynäköl.⁷ British Medical Journal, 1887. L'Union Médicale, May, 1887.⁸ On Typhoid Fever in Pregnancy, see report by Dr. Hirst, with discussion, THE MEDICAL NEWS, October 1887. Lyon. Méd., August, 1887.⁹ American Journal of Medical Sciences, March, 1888, p. 327.¹⁰ Revue Médico-Chirurgicale des Maladies des Femmes, March, 1888.¹ Woman and Her Diseases.² Physiology of the Mind.

I have heard an eminent neurologist say that if men's testicles were removed for the same reasons that lead some operators to extirpate women's ovaries, there would be a very large number of eunuchs. Admitting, then, the necessity for these operations thus made common to each sex, there may be compensations. Romeo and Juliet may disappear, but the problem of Malthus can no more vex political economist or philanthropist, and an important step toward the desirable and inevitable completion of human history, according to Schopenhauer, when the will to live, which especially expresses itself in reproduction, ceasing, the human race will pass into a dreamless sleep which knows no waking.

ORIGINAL ARTICLES.

THERAPEUTICS OF DIPHTHERIA.¹

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DIPHTHERIA is a contagious disease. Severe forms may beget severe or mild forms. Mild cases may beget mild or severe cases. There is probably no spontaneous origin of diphtheria, any more than there is a spontaneous origin of cholera or scarlatina. What has been called follicular amygdalitis (or "tonsillitis") is diphtheria in many, perhaps most, instances. It is seldom dangerous to the patient, because the tonsils have but very little lymph communication with the rest of the body. But the diphtheritic variety of follicular amygdalitis also is contagious. This mild variety is that from which adults are apt to suffer. It made me proclaim the warning that there is as much diphtheria out of doors as there is in doors; as much out of bed as in bed. With this variety the adult is in the street, in business, in the school-room, in the railroad car, in the kitchen and nursery. With this variety, parents while complaining of a slightly sore throat, kiss their children. Wherever it is suspected, it ought to be looked after. Where it is seen, it ought to be isolated and treated, less perhaps for the sake of those who are sick, than of those who are in serious danger of being infected. This is the more necessary, as this form is apt to last long and give rise to repeated attacks. But it is not only the mild variety which is liable to last long. Serious, undoubted cases are also apt to last for weeks, and some of them months. As long as they do persist, they are contagious.

These reminiscences and quotations from former writings must justify the preëminent place I claim for preventive treatment.

Those sick with diphtheria, severe or mild, must be isolated. If barely possible, the other children ought to be removed from the house. This can but

rarely be done in the homes of the poor, in the densely populated districts. A great charity is still waiting for its consummation, viz., that of erecting buildings, dormitories and playrooms for those who ought to be temporarily exiled from their infected homes. A suggestion of mine, before the New York State Medical Society, at its meeting of 1882, resulted in the erection of the Willard Parker Hospital of New York, for the benefit of those suffering from scarlatina and diphtheria. The erection of a sufficient number of temporary homes would be a still greater blessing to the poor, and a greater protection to the public at large. If it be impossible to send the well children away, let them remain outside the house, in the air, as long as feasible, and with open bedroom windows during the night, in the most distant part of the house; during the winter, on a lower floor. Their throats must be examined every day, and their rectal temperatures taken by the mother, so that the physician may be called on the occurrence of but slight changes. The few minutes spent in this way are amply repaid by the safety they may accomplish. The attendants upon cases of diphtheria must have no intercourse with the well children; though a brief visit of the physician may not render him sick, or dangerous to others, a long exposure affects him or a nurse, to a greater or less degree.

The well children of a family in which there is diphtheria, must not go to school or church. Schools must be closed when a number of pupils have been attacked; or, better still, when there is an epidemic, though it may not yet have affected the school children to a great extent, the teachers ought to be taught how to examine throats, and directed to do so every morning, and send home those children who are suspected.

When an attack of diphtheria has made its appearance, it is well enough to examine the hygienic condition of the house, with its deteriorating influences on the general health of the inmates, and to look after the source of the case in the persons of friends, attendants and help. A family with children ought to insist upon the occasional inspection of the throats of their servants; those with chronic pharyngeal catarrh must not be hired. A seamstress or laundress, coming for an occasional day's work, sick nurses, children's nurses and cooks, ought to be examined from time to time, the more so, the more such people are, for obvious reasons, inclined to conceal slight troubles. The opportunities for infection are so numerous that it is impossible to sail absolutely free from it. It is easy to imagine how many cases of diphtheria are liable to be disseminated by teachers, shopkeepers, restaurants, barbers and hairdressers.

In times of an epidemic, every public place, theatre, ball-room, dining-hall and tavern ought to be treated like a hospital. Where there is a large conflux of people, there are certainly many who

¹ Read, by invitation, before the Philadelphia County Medical Society, May 23, 1888.

carry the disease. Disinfection ought to be enforced at regular intervals. In this respect I can but repeat what I said in my treatise (p. 172) and Pepper's *Cyclopædia* (I. 697). Public vehicles must be treated in the same manner, after a suspicious case has been carried; that it should be so when a case of smallpox has happened to be conveyed in them, appears quite natural. Livery stable keepers, who would be anxious to destroy the germs of smallpox in their coaches, must learn that diphtheria is as dangerous a passenger as variola, and what is correct in the case of a poor hack is more so in that of a railroad car, whether emigrant or Pullman. I have seen many cases coming to and leaving the city in them. They ought to be thoroughly disinfected in times of an epidemic, at regular intervals, for the highroads of travel have always been those of epidemic diseases. Still, can that be accomplished? Will not railroad companies resist a plan of regular disinfections, because of their expensiveness? Will there not be an outcry against this despotic violation of the rights of the citizen, the independence of the money bag? Certainly there will be, exactly as there was when municipal authority commenced to compel parents to keep their children from school when they had contagious diseases in their families, and when smallpox patients were arrested because of their endangering the passengers in a public vehicle, or taken to a fever hospital for the protection of their neighbors. In such cases, it is not society, or the State, that tyrannizes the individual; it is the individual that endangers society.

To what extent the infecting substance may cling to surroundings is best shown by the cases of diphtheria springing up in premises which had not seen diphtheria for a long time, but had not been interfered with; and best, perhaps, by a series of observations of auto-infection. When a diphtheritic case has been in a room for some time, the room, bedding, curtains and carpets are infected. The child is getting better, has a new attack, may again improve, and is again stricken down. Thus I have seen them die; but also improve immediately after being removed from that room or house. If barely possible, a child with diphtheria ought to change its room and bed every few days.

To other rules of protection and disinfection, both private and public, including the prohibition of public funerals, I allude only for the purpose of referring to the admirable rules published by the National Board of Health, in its *Bulletin* No. 10, of September 6, 1879, and copied in my treatise on diphtheria, New York, 1880, and my article on diphtheria, in Pepper's *System of Practical Medicine*, vol. i. p. 698.

Prevention can accomplish a great deal for the individual. Diphtheria will, as a rule, not attack a healthy integument, be this cutis or mucous mem-

brane. The best preventive is, therefore, to keep the mucous membrane in a healthy condition. Catarrh of the mouth, pharynx and nose must be treated in time. Many a chronic nasal catarrh, with big glands round the neck, requires sometimes but two or three regular salt-water injections (1:130) into the nose, and gargling if the children be large enough to do so. The addition of one per cent. of alum will often be found useful. This treatment, however, must be continued for many months, and may require years. Still, there is no hardship in it and no excuse for its omission. The nasal spray of a solution of nitrate of silver, 1:500 or 1000 will accelerate the cure, and not infrequently has a treatment which was considered obsolete when I was young been of great service to me. It consists in the internal administration of the tincture of *pimpinella saxifraga*. It is certainly an efficient remedy in subacute and chronic pharyngitis and laryngitis. I generally give it to adults, diluted with equal parts of glycerin and water, a teaspoonful of the mixture every two or three hours, with the proviso that no water must be taken soon after.

Large tonsils must be resected in times when there is no diphtheria. During an epidemic every wound in the mouth is liable to become diphtheritic within a day, and, if feasible, such operations ought to be postponed. The scooping of the tonsils, for whatever cause, I have given up since I became better acquainted with the use, under cocaine, of the galvano-cautery. From one to four applications to each side, or to the post-nasal space, are usually sufficient for every case of enlarged tonsils or lacunar amygdalitis. It is advisable to cauterize but one side at a time, to avoid inconvenience in swallowing afterward, and to burn from the surface inward. Cauterization of the centre of the tonsils may result in swelling, pain and suppuration, unless the cautery is carried entirely to the surface; that means to say the scurf must be on, or extend to, the surface. Another precaution is to apply the burner cold, and heat it *in situ*.

Nasal catarrh and proliferation of the mucous and submucous tissues may require the same treatment, but in my experience the cases which require it are less frequent than those in which the tonsils need correction.

The presence of glandular swellings around the neck must not be tolerated. They and the oral and mucous membranes affect each other mutually. Most of them could be avoided, if every eczema of the head and face, every stomatitis and rhinitis, resulting from uncleanness, combustion, injury or whatever cause, were relieved at once. A careful supervision of that kind would prevent many a case of diphtheria, glandular suppuration, deformity or phthisis.

For its salutary effect on the mucous membrane

of the mouth, chlorate of potassium or sodium, which is still claimed by some to be a specific, or almost so, is counted by me amongst the preventive remedies. If it be nothing more, it is in a case of diphtheria an adjuvant. It exhibits its best effects in the catarrhal and ulcerous condition of the oral cavity. In diphtheria, it keeps the mucous membrane in a healthy condition, or restores it to health. Thus it prevents the diphtheritic process from spreading.

Diphtheria is seldom observed on healthy, or apparently healthy, tissue. The pseudo-membrane is mostly surrounded by a sore, hyperæmic, œdematous mucous membrane. Indeed, this hyperæmia precedes the appearance of the diphtheritic exudation in almost every case. The exceptions to this rule consist of those cases in which the virus may take root in the interstices between the normal tonsillar epithelia, pointed out by Stoehr but a few years ago. Indeed, many cases of throat disease occurring during the prevalence of an epidemic of diphtheria are but those of pharyngitis, which, under favorable circumstances, may develop into diphtheria. These throat diseases are so very frequent during the reign of an epidemic, that in my first paper on diphtheria (*Amer. Med. Times*, August 11 and 18, 1860) I based my reasoning on 200 cases of genuine diphtheria and 185 of pharyngitis, without a visible membrane.

These cases of pharyngitis, and such of stomatitis and pharyngitis accompanying the presence of membranes, are benefited by the local and general effect of chlorate of potassium. The surrounding parts being healthy or returning to health, the membrane remains circumscribed. The generally benign character of purely tonsillar diphtheria, which is apt to run its full course in from four to six days, has in this manner contributed to secure to chlorate of potassium the reputation of being a ready, *the*, remedy in diphtheria. The dose of the salt must not be larger than fifteen grains for an infant a year old, not over twenty or thirty for a child from three to five years, in the twenty-four hours. An adult should not take more than one and a half drachms daily. These amounts must not be given in a few large doses, but in repeated doses and at short intervals. A solution of one part in sixty will allow a teaspoonful every hour, or half a teaspoonful every half hour, in the case of a baby one or two years old.

It is not too late yet to raise a warning voice against the use of larger doses. Simple truths in practical medicine do more than simply bear repetition; they require it. For though the cases of actual chlorate of potassium poisoning are no longer isolated, and ought to be generally known, fatal accidents will still occur even in the practice of physicians. When I experimented on myself, with half ounce doses, thirty years ago, the results were some

gastric and intense renal irritation. The same were experienced by Fountain, of Davenport, Iowa, whose death from an ounce of the salt has been impressively described in Alfred Stillé's *Materia Medica*, from which I have quoted it in my treatise on diphtheria. His death from chlorate of potassium induced me as early as 1860 to prohibit large doses. In my contribution to Gerhard's *Handbuch der Kinderkrankheiten*, vol. ii., 1877, I spoke of a series of cases known to me personally. In a paper read before the Medical Society of the State of New York in 1879 (*Med. Record*, March 15th), I treated of the subject monographically, and alluded to the dangers attending the promiscuous use of the drug, which has descended into the ranks of domestic remedies; and, finally, in my treatise (New York, 1880), I collected all my cases and the few then recorded by others. Since that time, the recorded cases have become quite numerous, and but a few days ago a few new ones were related before the Practitioners' Society of New York. The facts are undoubted, though the explanations may differ. The probability is that death occurs from methæmoglobinuria produced by the presence of the poison in the blood; though Stockvis, of Amsterdam, has tried, by a long series of experiments, to fortify my original assumption that the fatal issue was due to acute nephritis.

The attempts at forming indications for the treatment of patients with diphtheria—I refuse to say treatment of diphtheria, based upon the preconceived or acquired idea as to the nature and causes of diphtheria, are all futile. We know that many cases are undoubtedly of local origin; but there are those in which we require no other proof of its original infectious character than the fact that there is a period of incubation. But all that is indifferent, in view of the fact that the cases we are called upon to treat are, as a rule, or have become, both local and constitutional. It is these we have mostly to deal with.

There is no better proof of the non-existence of a specific in diphtheria than the fact that the pharmacopœia has been exhausted to find one, and new remedies, legitimate and illegitimate, are all the time being recommended as panaceas. While there are certain indications resulting from the characteristics common to all, every case must be treated on general principles, which must be applied to the prominent individual features. When there is a high temperature in the beginning, it requires all the tact of a good physician to judge of the advisability of reducing it by antifebriles, such as sponging, warm bathing, cold bathing, antipyrin, antifebrin, or the subcutaneous use of the carbamide of quinia. Convulsions may demand active treatment, such as chloroform inhalations, or chloral hydrate internally or by the rectum. Vomiting or other cerebral symp-

toms may ask for liquids, or smaller or larger doses of opiates. A very quick and feeble pulse may require a few large doses of a heart stimulant, digitalis, strophanthus or sparteine, in the very beginning.

Renal complications are frequent, and occur at an early time. The majority of cases terminate favorably; in some, a large amount of albumin will be eliminated in the course of a few days, and disappear shortly. But whether your individual case will be of that nature, you do not know, and, in time of danger, nothing must be taken for granted. Milk or farinaceous diet, plenty of water or, better, Poland, Bethesda, Seltzer, Apollinaris or Vichy, warm bathing, warm feet, a few good doses of calomel, a number of hourly or two-hourly, small doses of opium (which are better than those of digitalis and nitro-glycerin) will often prove beneficial. If a diffuse nephritis, such as is more frequently met with in scarlatina, be the result, it impairs the prognosis, and requires further treatment, conducted on general principles.

To what extent *local treatment*, if it be possible to employ it, is effective, can best be seen on external diphtheritic surfaces: thus the cutis denuded by vesicatories, the inguinal regions sore with intertrigo, the vagina, circumcision wounds or tracheal incisions. I have tried almost everything which has been recommended for these conditions, but am most pleased with the effect of iodol or iodoform powdered, or one part with eight or ten of vaseline. Powders of subnitrate of bismuth, boric acid or salicylic acid, with fifteen or twenty-five times its quantity of starch, have not given me the same satisfaction.

The treatment of *diphtheritic conjunctivitis* requires also nothing but local treatment. It consists in the application of small ice-bags or iced cloths, which must be changed every few minutes, and the frequent instillation of a saturated solution of boric acid, with or without atropia.

The *local treatment* of pseudo-membranes of the fauces is a subject of great importance. To look upon them as an excretion which needs no interference is incorrect. If it were possible to remove or destroy them, it would be a great comfort; but they can be reached only in certain places, and just in those in which they do the least harm. Pseudo-membranes on the tonsils are the least dangerous, for their lymph communication with the rest of the body is very scanty. Thus, almost all forms of tonsillar diphtheria are amongst the most benign, at least as long as the process does not extend. Most cases of the kind run their mild course in from five to seven days, and it is just these which have given rise to the many proposals of tearing, scratching, cauterizing, swabbing, brushing and burning. They are cases which do not show the harm done. The fact is, that neither the galvano-cautery, nor carbolic acid, nor tannin and glycerin, nor perchloride or

subsulphate of iron can be applied with leisure and accuracy to the very membrane alone, except in the cases of very docile and very patient children. In almost every case, the surrounding epithelium is getting scratched off or changed, and thus the diphtheritic deposit will spread. Besides, the membrane of the tonsil is changed surface tissue, as it always is wherever the epithelium is pavement, and not deposited upon the mucous membranes, from which it might be easily detached. Whatever is done must be accomplished without violence of any kind. If nasal injections be found advisable, they can be made to wash the posterior pharynx and the tonsils sufficiently, so as to render the special treatment directed to the throat absolutely useless. Besides, it is easier, and meets with less objection, and gives rise to less exhaustion than the forcible opening of the mouth. This is of very great importance, as I shall show in connection with the local treatment of the nasal cavity. Where it is possible to make the local applications without difficulty, the membrane may be brushed with tincture of iodine several times daily, or a drop of rather concentrated carbolic acid. Of powders, I know only one, the application of which is not contraindicated, viz., calomel. Even this may irritate by its very form. Everything dry irritates and gives rise to cough or discomfort. Whatever has, besides, a bad taste or odor, such as sulphur, iodoform or quinia, must be abhorred.

For the purpose of dissolving membranes, papayotin or papain has been employed. It is soluble in twenty parts of water, and may be injected, sprayed or brushed on. I have used it in greater concentration, in two or four parts of water and glycerin, in the nose, throat and, through the tracheotomy tube, in the trachea. One of the irrepressible drug manufacturers and advertisers pushes the claims of some modification of the drug which he calls papoid. For the same purpose, trypsin is preferred by others. The mode of its application appears to be the reverse of indifferent. But lately I have seen, in the practice of one of our best-known practitioners, papayotin applied in powder, which resulted in constant irritation of the throat, while the patient otherwise was convalescent. The pharyngeal hyperæmia and slight exudation disappeared when mild alum washes were substituted.

Steam.—Its inhalation is useful in catarrh of the mucous membranes, and in many inflammatory and diphtheritic affections. On mucous membranes, it will increase the secretion and liquefy it, and thus aid in the throwing off of the pseudo-membranes. Its action is the more pronounced the greater the amount of muciparous follicles under or alongside a cylindrical or fimbriated epithelium. Thus it is that tracheo-bronchial diphtheria, so-called fibrinous bronchitis, is greatly benefited by it. Children affected with it I have kept in small bath-rooms for

days, turning on the hot water, and obliging the patient constantly to breathe the hot clouds. Several such cases I have seen recover with that treatment. Atomized cold water will never yield the same result. Nor have I seen the patent inhalers do much good.

Still, where the surface epithelium is pavement rather than cylindrical, and but few muciparous follicles are present, and the pseudo-membrane is rather immersed in, and firmly coherent with, the surface—for instance, on the tonsils and the vocal cords, the steam treatment is less appropriate. On the contrary, moist heat is liable in such cases to favor the extension of the process by softening the hitherto healthy mucous membrane. Thus it takes all the tact of the practitioner to select the proper cases for the administration of steam, not to speak of the judgment which is required to determine to what extent the expulsion of air from the steam-moistened room or tent is permissible.

Steam can be properly mixed with medicinal vapors. In the room of the patient, water is kept boiling constantly, over the fireplace, provided the steam is prevented from escaping directly into the chimney, on a stove (the modern self-feeders are insufficient for that purpose and abominations for every reason), over an alcohol lamp, if we cannot do better, not on gas if possible, because of the large amount of oxygen which it consumes. Every hour a tablespoonful of oleum terebinthinæ, and perhaps also a teaspoonful of carbolic acid, is poured on the water and evaporated. The air of the room is filled with steam and vapors, and the contact with the sore surfaces and the respiratory tract is obtained with absolute certainty.

The secretion of the mucous membranes is sometimes quite abundant under the influence of steam, but still, like that of the external integuments, increased by the introduction of water into the circulation. Therefore, drinking of large quantities of water, or water mixed with an alcoholic stimulant, must be encouraged. Over a thoroughly moistened mucous membrane the pseudo-membrane is more easily made to float and macerate.

It was for this purpose that pilocarpine, jaborandi, was highly recommended. Guttman recommended it as a panacea in all forms of diphtheria. There is no doubt that the secretion of the mucous membrane is vastly increased by its internal application, and by repeated subcutaneous injections of the muriate or nitrate of the alkaloid, but the heart is enfeebled by its use. I have seen but few cases in which I could continue the treatment for a sufficient time. In many, I had to stop it because, after some days of persistent administration, I feared for the safety of the patients. Thus, as early as the meeting of the American Medical Association, at Richmond, eight years ago, I pointed out the exaggerations in the

statements of Guttman. There will be but exceptional cases in which pilocarpine will be tolerated long enough to do good. It is one of the remedies by which we may cure our case and will kill our patient.

Diphtheria of the nose is apt to terminate fatally, unless energetic treatment is commenced at once. This consists in persevering disinfection of the mucous surface. The disinfecting procedure must not be omitted long, because of the general sepsis resulting from rapid absorption from the surface, which is supplied with lymph ducts and small superficial bloodvessels to an unusual extent. Disinfectant injections must be continued every hour, for one or more days. If they are well made, the consecutive adenitis, particularly that about the angles of the lower jaw, is soon relieved and the general condition improved. But there are cases in which not the lymph bodies are the main gates through which constitutional poisoning takes place, but the bloodvessels only. In the incipient stage of such cases, the discharge from the nostrils is more or less sanguineous; in them, the bloodvessels, thin and fragile, carry the poison inward with great rapidity.

In a few cases injections are unsuccessful. They are those in which the whole nasal cavity is filled with membranous deposits to such an extent as to require forcible treatment. Sometimes it is difficult to push a silver probe through it. That procedure may be repeated, the probe dipped in carbolic acid, or wrapped in absorbent cotton moistened with carbolic acid of 50 or 60 per cent. After a while injections alone will suffice. But now and then, the development of pseudo-membranes is very rapid; a few hours suffice to block the nostrils again, and the difficulty is the same.

The liquids which are to be injected must be warm and fairly mild. Solutions of chloride of sodium, two-thirds of one per cent., saturated solutions of boric acid, one part of bichloride of mercury, 35 of chloride of sodium, and 5000 of water, more or less, or lime-water, or solutions of papayotin, will be found satisfactory. From the selection of these remedies, it is at once apparent that the object in view is partly that of washing out, and partly of disinfecting. I have not mentioned carbolic acid, which may be used in solutions of one per cent. or less. Its employment requires care, for much of the injected fluid is swallowed, and proves a danger to children of any age, but mostly to the young.

Most of the syringes I find in my rounds are abominations. The nozzle must be large, blunt and soft. After having recommended for many years the common hard-rubber ear syringe, the sharp end of which was cut off, I now use always a short stout glass syringe with soft rubber mounting in front.

When the children cannot, or must not be raised,

I employ the same solutions from a spoon or a plain Davidson atomizer. These applications can thus be made while the children are lying down, every hour or very much oftener, without any or much annoyance. The nozzle must be large, so as to fit the nostril. A single spray on each side will generally suffice. I am in the habit of covering the common nozzle with a short piece of India-rubber tubing.

For a day or two, these injections of fluids or spray must be made hourly. It is not cruel to wake the children out of their septic drowsiness; it is certain death not to do it.

Injections of the nose are oftener ordered than judiciously made. Hundreds of times have I been assured that they had been made regularly, hourly, for days in succession. Still there was a steady increase of glandular swelling and sepsis. I never believe a nurse to have made them regularly unless I have seen her doing it. They *will* run up their syringe vertically and not horizontally; the fluid *will* return through the same nostril. On the successful injecting or spraying of the nares hangs every life in cases of nasal diphtheria. I have long learned to look upon a neglect to tell at every visit how to make an injection as a dereliction of duty. This may appear a trifling way, but it is a safe one. The nurse must be made to tell you that at every injection the fluid returns through the other nostril, or through the mouth, or is swallowed.

The procedure is simple enough, and need not take more than half a minute for both nostrils. A towel is thrown over the child's chest up to the chin, and the child gently raised in bed by the person who is to make the injection. This person, sitting on the bed, steadies the patient's head against her chest, while somebody else holds the patient's hands. The syringe is introduced horizontally by the person sitting behind the patient, and gently emptied. No time must be lost in refilling, and attending to the other side. When pain is complained of in the ears, more gentleness is required, or the spray, or pouring in from a spoon, or minim dropper even, has to take the place of the injection.

Many sins are committed in even doing this simple thing. The unfortunate little one is made to see all the preparations, and is worried and excited, and the necessary gentleness in the proceedings is neglected. The cases reported by me before the Section on Theory and Practice in the New York Academy of Medicine, in a discussion on the local treatment of diphtheria, read as follows:¹

"There were two trained nurses, and two children of six and four years. When I saw the little four-year-old, the other was dead. Where did he die? His head between the knees of the trained nurse.

They had been told that Dr. Jacobi ordered nasal injections to be made every hour in such cases. Every hour the unfortunate boy was lugged out of bed, protesting and fighting, and wearing out his little strength in his battle against two trained brutes; had his head rammed between the knees of one of them, who was herself comfortably seated on a chair, while the other did the rest; and thus the boy was murdered. When I heard that fearful story from the smiling lips of that person, I begged and pleaded, and showed her how to do it gently. A week afterward, the doctor told me that the little girl died between the knees of one of the smiling creatures; and neither of them is in the State prison."

What is the concentration in which antiseptic injections should be used? For twenty-five years and more, while employing irrigations and injections frequently, I had used quite weak solutions, and felt assured of their efficacy. All at once (when the gospel of bacteria was being preached) it was claimed that weak solutions were useless and a snare, because antiseptics, and particularly carbolic acid, would not destroy bacteria and bacteria-poisons, except in such doses and concentrations as would necessarily destroy blood and tissues first. I felt dismayed, but still continued in my heretic ways, hoping that improved knowledge would finally harmonize theory and practice. So it happened. In *The American Journal of the American Sciences* for January, 1881, T. Mitchell Prudden proved that a solution of one-sixteenth of one per cent. of carbolic acid prevents the emigration of white blood-corpuscles under circumstances otherwise favorable to inflammation, and Koch found that though bacteria are not easily killed, their growth is stopped by a solution of one part of carbolic acid in 850, and their activity by one in 1200. These effects are all that is required for practical purposes; thus the frequency of applications is justified by both necessity and safety.

Diphtheritic adenitis, the swelling of the cervical glands near the angles of the lower jaw, to which I have alluded as an ominous symptom, points to nasal and nasopharyngeal infection. The treatment consists in disinfection of the absorbing surfaces.

Direct local treatment of the glands, if not entirely useless, is, at all events, of minor importance and efficiency. Applications of one part of carbolic acid to ten of alcohol irritate both surface and patient more than they can do good. Inunctions may do some good by friction (massage); inunctions with some absorbable material in them may do a little better. The common iodide of potassium ointment is useless; iodide of potassium in three or five parts of glycerine is more readily absorbed; the same in equal parts of water, with a little animal fat, and six or eight times its quantity of lanolin, gives an ointment which is readily absorbed. Iodine is found in the urine within a few hours. Iodoform may be utilized in the same way. Injections of

¹ New York Medical Record, 1887, p. 403.

iodoform in ether, which I suggested some time ago, are too painful. Mercurial inunctions, those of blue ointment, require too much time for any effect to take place. Oleates are too irritating locally; a lanolin ointment would prove more satisfactory. After all, however, the readiest method of reducing the swelling of the glands, and improving the prognosis accordingly, is that of cleansing and disinfecting the field of absorption. The rare cases of suppuration in these glands require incision and disinfection. They are, however, as ominous as rare. There is but little pus, as a rule, but one or many local deposits of disintegrated gland cells and gangrenous connective tissue. The incisions must be extensive; the scoop and concentrated carbolic acid must be freely used. In these cases, hemorrhages may occur, some of them very difficult to manage. I have seen some of them terminate fatally. In these, carbolic acid must be avoided. Compression, actual cautery and acupressure have rendered good service. Solutions of iron must be avoided, for the scurf formed is a shield behind which deleterious absorption is constantly going on in such wounds, as it does in the uterus.

Besides sepsis, the great dangers in diphtheria are heart failure and strangulation. The latter has its own indication, to which I shall not allude to-day. Heart failure exhibits itself sometimes quite suddenly, but, as a rule, it is foreshadowed by a gradually increasing frequency, weakness of heart-beats and pulse, and the equal length of the intervals between the feeble systole and diastole, and diastole and systole. This equality is always a dangerous symptom. Heart failure is due to myocardial changes, besides the influences common to every fever. These may depend on the influence of the septic decomposition of the blood, and the ill nutrition of the heart-muscle depending thereon, or the direct diphtheritic changes of the tissue, or both. These changes and dangers set in, sometimes, at a very early period. Thus, whatever enfeebles must be avoided. Patients must be spared every unnecessary activity. They must remain in bed, without excitement of any kind, take their meals, and evacuate their bowels in a recumbent or semi-recumbent position; crying and worrying must be avoided; the room kept airy, and rather dark, so as to encourage sleep if the patient be restless. In no disease, except, perhaps, in pneumonia, have I seen more fatal results from sudden changes of posture, or from exertion. Unless absolute rest be enforced, neither physician nor nurse has done his or her duty.

The threatening feebleness of the heart yields a positive therapeutical indication. In no disease is the danger greater from the side of the heart, in no disease is the indication for sustaining and strengthening the heart more positive from the very beginning. Digitalis, strophanthus, sparteine, besides camphor,

alcohol and musk, must not be postponed until feebleness and collapse have set in. It is possible or probable that they will appear; and it is certain that a cardiac stimulant will do no harm. It is safe and advisable to use them at an early date. That is particularly necessary when antipyrin or antifebrin is given. A few grains of digitalis, in a palatable and digestible form, may, or must, be given daily. When a speedy effect is required, one or two doses of from two to four grains are not too large, and must be followed by smaller ones. When it is justly feared that the effect of digitalis may be too slow, I give, with or without the former, sulphate of sparteine. An infant a year old will take one-tenth of a grain four times a day, as a matter of precaution, and every hour or every two hours, in an emergency.

Of at least the same importance as cardiac tonics are alcoholic stimulants. The advice to wait for positive symptoms of heart failure and collapse, before the life-saving apparatus is employed, is bad. There are cases which get well without treatment, but we do not know beforehand which they will be. No alleged mild case is safe until it has recovered. When heart failure sets in—and often it will occur in apparently mild cases, our efforts are too often in vain. Thus, alcoholic stimulants ought to be given early, and in large quantities, though amply diluted. There is no such thing as intoxication or danger from it, in septic diseases. A few ounces daily may suffice, but I have given ten ounces of brandy or whiskey daily, to save children who had done badly with three and four.

Coffee is a good stimulant for the heart. Camphor may be employed to great advantage for the same purpose. From five to twenty-five grains may be given daily, as camphor water, or in a mucilaginous emulsion, which is easily taken. It does not upset the stomach as ammonium carbonate is liable to do. When a rapid effect is aimed at, it may be employed subcutaneously in five parts of oil, which is milder and more convenient than ether.

But the best internal stimulant, in urgent cases, is Siberian musk, in powders, or with mucilage. When required at all, it ought to be given in sufficient doses and at short intervals. When ten or fifteen grains, administered to a child one or two years old, will not accomplish, within three or four hours, a return of a more satisfactory heart's action, the prognosis is very bad.

Besides exhaustion at the height of the disease, we have paralysis during convalescence, or intense anæmia long after apparent recovery. This anæmia may be general, or is local, and then mostly cerebral.

Diphtheritic paralysis, though of different anatomical and histological origin, yields in all cases a certain number of identical therapeutical indications. These are: The sustaining of the strength of the

heart by digitalis and other cardiac tonics. A child of three years may take daily, for a month, three grains or its equivalent; for instance, one grain of the extract. This is an indication on which I cannot dwell too much. Many of the acute, and most of the chronic diseases of all ages do very much better by adding to other medications a regular dose of a cardiac tonic. It is true that it is a good practice to follow the golden rule to prescribe simply, and, if possible, a single remedy only, but a better one to prescribe efficiently. A prescription paper with a single line on it looks well, but a readily convalescent or well man looks better.

Besides, there are some more indications: Mild preparations of iron, provided the digestive organs are not interfered with. Strychnia or other preparations of nux at all events. In ordinary cases, a child of three years will take an eightieth of a grain three or four times a day. Local friction, massage of the throat, of the extremities and trunk, dry or with hot water, or oil, or water and alcohol; and the use of both the interrupted and continuous currents, according to the known rules, and the locality of the suffering parts, find their ready indications. The paralysis of the respiratory muscles is quite dangerous; the apnoea resulting from it may prove fatal in a short time. In such cases, the electrical current used for very short periods, but very frequently, and hypodermatic injections of sulphate of strychnia in more than text-book doses, and frequently repeated, will render good service. I remember a case in which these and the occasional use of an interrupted current, and occasional artificial respiration by Silvester's method, persevered in for the better part of three days, proved effective.

Chloride of iron.—I am still, as I was in my first paper on diphtheria, in 1860, an advocate of the internal use of chloride of iron. Its mode of administration I have not changed much these twenty years. At a public lecture delivered before a New York audience, by an European authority, whose name has lately appeared a little more prominently in the newspapers than an American physician would wish, I was highly praised for giving a few drops of the tincture of the chloride of iron a few times a day. This eulogy I have always tried not to deserve, for the efficient method of its administration is not that. The chloride of iron is an astringent and antiseptic. Its contact with the diseased surface is as important as its general effect; therefore, it must be given frequently, in hourly or half hourly doses, even every twenty or fifteen minutes. An infant of a year may take forty-five or sixty grains a day, a child of three or five years one hundred and twenty or one hundred and eighty. It must be mixed with water to such an extent that the dose is half a teaspoonful or a teaspoonful; a drachm in four ounces allows half a teaspoonful every twenty

minutes. No water must be drunk after the medicine. As a rule, it is well tolerated. There are some, however, who will not bear it well. Vomiting or diarrhoea is a contraindication to persevering in its use, for nothing must be allowed to occur which reduces strength and vigor. A good adjuvant is glycerin; better than syrups. From ten to fifteen per cent. of the mixture may consist of it. Now and then, but rarely, it is not well tolerated either. When diarrhoea sets in, glycerin must be discontinued. Still, these cases are rare; indeed, the stomach bears glycerin very much better than the rectum. In the latter, the presence of a small dose of glycerin is known sometimes to produce large evacuations, a result appropriated and utilized by an advertising nostrum monger.

In connection with this remedy, I wish to make a remark of decidedly practical importance. I know quite well that recovery does not always prove the efficacy of the remedy or remedies administered. But I have seen so many bad cases recover with chloride of iron, when treated after the method detailed above, that I cannot rescind former expressions of my belief in its value. Still, I have often been so situated that I had to give it up in peculiar cases. These are such in which the main symptoms are those of intense sepsis, I should say such in which the iron and other rational treatment was not powerful enough to prevent the rapid progress of the disease. Children with naso-pharyngeal diphtheria, large glandular swelling, feeble heart and frequent pulse, thorough sepsis, and irritable stomach besides, those in which large doses only of stimulants, general and cardiac, can possibly promise any relief, are better off without the iron. When the circumstances are such as to leave the choice between iron and alcohol, it is best to omit the iron and rely on stimulants mostly. The quantities required are so great that the absorbent powers of the stomach are no longer sufficient for both.

Nor is iron sufficient or safe in those cases which are preëminently laryngeal. To rely on iron in membranous croup means waste and danger.

Mercury.—The first volume of *A System of Practical Medicine by American Authors*, which appeared in 1885, contains in an article on diphtheria, written in 1884, the following remarks on page 705:

"Not all cases of diphtheria are septic or gangrenous, nor are all the cases occurring during an epidemic of the same type. Some have the well-pronounced character of a local disease, either on the tonsils or in the larynx. The cases of sporadic croup, met with in the intervals between epidemics, present few constitutional symptoms, and assume more the nature of an active inflammatory disease, very much like the sporadic cases of fibrinous tracheo-bronchitis. These are the cases in which mercury deserves to have friends, apologetists and even eulo-

gists. Calomel, 0.5-0.75 gramme (grs. viij-xij), divided into thirty or forty doses, one of which is taken every half hour, is apt to produce a constitutional effect very soon. Such, with minute doses of one milligramme (gr. $\frac{1}{60}$ th) or more of tartar emetic, or ten or twenty times that amount of oxysulphuret of antimony, have served me well in acute fibrinous tracheo-bronchitis. But the mucous membrane of the trachea and bronchi is more liable to submit to such liquefying and macerating treatment than the vocal cords. The latter have no muciparous glands like the former, in which they are very copious. And while the tracheal pseudo-membrane, though recent, is apt to be expelled through a tracheal incision at once, that of the vocal cords takes from six days to sixteen or more for complete removal. Still, a certain effect may even here be accomplished, for maceration does not depend only on the local secretion of the muciparous glands, but on the total secretion of the whole surface, which is in constant contact with the whole respiratory tract. Thus, either on theoretical principles, or on the ground of actual experience, men of learning and judgment have used mercury in such cases as I have detailed above, with a certain confidence."

"If ever mercury is expected to do any good in cases of suffocation by membrane, it must be made to act promptly. This is what the blue ointment does not. In its place I recommend the oleate, ten or twelve minims of which may be rubbed into the skin along the inside of the forearms or thighs, or anywhere else, every hour or two hours, when those surfaces become irritated. Or repeated doses, such as mentioned before, will be useful, or hypodermatic injections of corrosive sublimate, in one-half or one per cent. solution in distilled water, four or five drops from four to six times a day or more, either by itself or in combination with the extensive use of the oleate, or with calomel internally. Lately, the cyanide of mercury has been recommended very strongly. I hardly believe that it will work more satisfactorily than any other equally soluble preparation. Within the past few years, the internal administration of bichloride of mercury has been resorted to more frequently and with greater success than ever before.

"My own recent experience with it has been encouraging, and so has that of some of my friends. William Pepper gave one thirty-second of a grain of corrosive sublimate every two hours in a bad form of diphtheritic croup, with a favorable result. But in this very bad case, desperate though it was—child of five years, respiration 70, pulse 160, large membrane, 'evidently from the larynx,' had been expelled before the treatment was commenced on the seventh day of the disease. The solution ought to be given in solution of 1 : 5000, and in good doses. A baby, a year old, may take one-half grain every day many days in succession, with very little, if any, intestinal disorder, and with no stomatitis. A solution of the corrosive sublimate in water is frequently employed of late as a disinfectant. It acts as such in a dilution of 1 in 20,000. As healthy mucous membrane bears quite well a proportion of 1 : 2000 or 3000, any strength between these extremes may be utilized.

A grain of the sublimate in a pint or more of water, with a drachm of table salt, will be found both mild and efficient. As a gargle and nasal injection, it will be found equally good. But it has appeared to me that frequent applications give rise to a copious mucous discharge; hourly injections into a diphtheritic vagina become quite obnoxious by such over-secretion, which ceases at once when the injections are discontinued. Thus, when it is desirable not only to disinfect, but also to heal the diseased surface, the injections with corrosive sublimate appear to yield a result inferior to less irritating applications."

These remarks of 1884 constitute what I consider a great progress over the statements of my treatise on diphtheria, 1880, which are more cautious and negative. Extensive experience with the remedy increased my favorable opinion of its efficiency to such an extent as to induce me to publish a number of cases and conclusions in the *Medical Record* of May 24, 1884.

They have been amply justified by the observations of the last four years, so that I am fully prepared to commit myself to the following statements: My conviction of the utter uselessness of internal medication in laryngeal diphtheria, membranous croup, is strongly shaken. The mortality of 90 or 95 per cent. of the cases not operated upon has no longer existed these five or six years, in my observation. The above figures were by no means taken from small numbers. For, since 1860, I have tracheotomized more than 500, perhaps 600, times, have assisted in as many more operations, and seen at least a thousand case of membranous croup which were not operated upon at all. During the last six years, I have seen no less than 200 cases, perhaps many more. Amongst them recoveries have not been rare. In the practice of no less a man than O'Dwyer, I have seen two cases of general and laryngeal diphtheria in the same family, which got well without any operative procedure. Such recoveries have taken place at all ages, from four months upward. The uniform internal medication consisted in the administration of the bichloride of mercury. The smallest daily dose was a quarter of a grain. Half a grain daily, continued through five or six, sometimes eight, ten or even twelve days, has not been rare amongst children of from three to six years. The doses varied from one-sixtieth to one-fortieth of a grain, and sometimes more. They are given every hour. They require dilution in a tablespoonful of water or other compatible fluid, for instance milk, in order to be quite innocuous. They are not liable to produce gastric or intestinal irritation. When the latter occurred, it was generally found that by some mistake the solution was as strong as 1 : 2000 or 1 : 3000. In the few cases in which it did exist, or was believed to result from the

remedy, a few minims of camphorated tincture of opium administered with every dose, for a short period, proved sufficient to check it. The beneficial effect of the remedy depends greatly on the time of its administration. As a rule, such complete stenosis as necessitates surgical interference develops after days only. This necessity is often obviated by the remedy when given as detailed. When an operation is required after all, the treatment must be continued. I have never since 1863 seen so many cases of tracheotomy getting well as between 1882 and 1886, when the bichloride was constantly used as mentioned. Nor am I alone with these observations. I can name a dozen of New York physicians, some of whom have often performed tracheotomy, who can confirm the above statements from their own observations. Nor does the opinion of those differ who constantly perform intubation. I know that O'Dwyer, Dillon Brown and Huber have come to the same conclusions, the latter having been a successful tracheotomist before he earned his laurels with intubation.

My experience in regard to the efficacy of the bichloride of mercury is mainly gathered in cases of laryngeal diphtheria, and a limited number of fibrinous bronchitis. It is there where it has been particularly effective. Still I must not say that they were localized affections. These, with us, are but very scarce. Our cases of diphtheritic laryngitis are mostly decreasing, and complicated with either diphtheritic pharyngitis or rhinitis, or both. Not a few, mainly of the latter kind, exhibit constitutional symptoms, sepsis. But cases of that kind, also, I have seen getting well. One of the most interesting was that of a girl of seven years whom I saw a single time in consultation with Dr. J. Anderson. There was nasal and pharyngeal diphtheria, cervical adenitis and some laryngeal stenosis. I recommended an hourly dose of one-fortieth of a grain of bichloride, which she took for ten days, also nasal injections of the same, one grain to a pint. They were made hourly for many days, and altogether continued for more than a fortnight, for the patient lived so long, and is still alive. She swallowed almost all the nasal injections, and great was my surprise when, after some weeks, I received the report of the case, and learned that about twenty grains of the bichloride had found their way into the stomach of the little girl. She lived, had but little stomatitis, and hardly any intestinal irritation. If the case does not prove anything else, it proves this, that even desperate cases will get well; this case got well with the bichloride of mercury, and resembles all the other cases in this, that after the rational and careful administration of solutions of hydrargyrum bichloride, local mercurial symptoms about gums, mouth, pharynx and intestines are extraordinarily rare in infancy and childhood.

ON GOUTY SORE THROAT.¹

By HARRISON ALLEN, M.D.,
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By the term "gouty sore throat" is meant the presence of distress, in or about the pharynx or larynx, dependent upon the existence of gout in the system. Such a clinical condition is mentioned by writers, but, for the most part, in connection with metastasis. For example, an affection of the pharynx is known to be of a gouty nature when its announcement is connected with the sudden disappearance of gout elsewhere.

The recognized forms of sore throat which relate to diathesis are the rheumatic, the tubercular (probably including the so-called scrofulous), and the syphilitic. Schech includes a scorbutic form. In the tubercular and syphilitic varieties a lesion or local deposit would be requisite to a diagnosis. In the rheumatic form this is not the case, nor is it so in the gouty. Schech² does not admit the gouty form. It is accepted by Prosser James.³ The account given by Morell Mackenzie relates only to metastasis. Lennox Browne⁴ agrees with Schech in the main, though acknowledging that cases are seen in which the administration of gouty specifics is a necessary adjunct to the local measures. This writer accepts a gouty variety of perichondritis.⁵ That Scudamore⁶ may be said to have recognized sore throat in connection with gout is likely, if we correctly interpret the following language:

"A cough with much mucous secretion in the tracheal membrane sometimes precedes the fit; yielding when the gout becomes fixed, *occasionally continuing with the other symptoms*. This description of cough is to be distinguished entirely from the recent catarrhal cough and symptoms which sometimes usher in a paroxysm, when exposure to wet and cold has been the exciting cause. The mucous membranes of the parts which have been affected with disease, or which are prone to disease, are *much disposed to acquire a state of unhealthy action*; in apparent sympathy, either with that condition of the constitution which borders on a fit of the gout, or in which the disease is threatening its return, but does not develop itself."

The literature of gouty sore throat is scanty. Musgrave⁷ is accredited with a good account of the condition. The following detailed examples, which have been diagnosticated gouty apart from metastasis, are the only ones known to the writer. It will be seen that they are of doubtful value. In a case reported by J. de Lagoanère⁸ under the title of "an-

¹ Read before the meeting of the Pennsylvania State Medical Society, June 7, 1888.

² Diseases of the Mouth, etc.

³ Sore Throat, 1878, 120.

⁴ The Throat and its Diseases, 1877, 104.

⁵ Ibid., 299.

⁶ A Treatise on the Nature and Cure of Gout and Rheumatism, etc. Amer. ed., 1819, 10.

⁷ De Arthride Anomala.

⁸ Les Angines rhumatismales et gouteuses Thèse, Paris, 1876, p. 50

gine gouteuse" an account of septicæmia is given. It occurs in a man thirty-seven years of age, without gouty antecedents, and by occupation a house painter.

The patient is admitted into the Hotel Dieu suffering from acute inflammation of the right ankle, tarsus, and the joints of the great toe. The fourth day after admission a phlegmonous inflammation of the pharynx is abruptly developed, without metastasis; an abscess is detected which is spontaneously ruptured upon the seventh day. Retention of urine, albuminuria, endocarditis, and empyema ensue, and the patient dies on the fourteenth day.

Garrod describes a form of gout which is often seen among workers in lead, but in connection with gout already established. The case narrated belongs, if to the group of gout cases at all, in such a subdivision. The pharyngeal complication which preceded the fatal termination, can scarcely be embraced under the head of "angine gouteuse."

Lasègue appears to have recognized the coexistence of sore throat with gout. But the description by Lagoanère¹ of a case of Lasègue² does not give the writer the impression that it is similar to any of the instances upon which this paper is based.

A merchant, aged thirty-eight, is treated for a sore throat. No exact gouty history is given. The mother of the patient had suffered at the menopause from painful and swollen joints of the fingers. It is thought that these swellings are *either* rheumatic or gouty. There is no description of gouty attacks in the patient. An account of chronic pharyngitis is detailed. In the treatment neither colchicum nor other anti-lithic appears to have been administered.

I have thought a study of sore throat which, while independent of metastasis, was found in gouty subjects, and which yielded only to remedies for gout, might prove of interest.

No one group of symptoms is to be expected in a disease so protean as is gout. The subjects of gouty sore throat have been almost always in middle life. A disposition to gout has been traced through several members of the family in all but a single example.

The distress may be confined to the throat, or be referred to it from a catarrh of the nasal passages. It is not apt to develop during an acute attack, but to occur in those who are prone to neuralgic forms of irregular gout—especially of the viscera—or in persons of gouty habit who are careless in their diet. Thus dyspepsia and constipation are of frequent occurrence. The tongue is often persistently furred or pasty.

It goes without saying that a sore throat occurring in a subject who inherits or acquires gout is not of necessity of a gouty nature. The judgment of a

careful observer is alone required to distinguish between the essential complaint and its counterfeits.

The only ailment with which gouty sore throat may be confounded is the irritable throat of lithæmia. Lithæmia occurs at any time of life. It is often dependent on the diet, and can be controlled by the withdrawal of wines and nitrogenous food, and by increasing the activity of the kidneys. In young persons, the subjects of lithæmia, the pharynx presents a definite appearance. The mucous membrane is of a uniform red color, the secretions are abundant, and the tonsils are tumid. The health is good, often, indeed, robust. In older persons the appearances are less constant. The tonsils are often small and concealed, and the parts bathed in secretion. Pain is usually not severe, and is referred to the pharynx and not to the muscles at the side. In true lithæmia, the gouty history is absent.

Perhaps the best guides to a gouty condition are furnished by the permanent teeth. While not essential to a diagnosis—for in a marked instance known to the writer, the teeth do not conform to the rule, it is very generally found that the teeth are large—the antero-posterior diameters being especially exaggerated, the enamel thick and of a yellowish color. The peculiarities of gouty teeth are confined to the incisors, canines and bicuspsids. The crowns are often marked by transverse lines, and the bases of the lingual and palatal surfaces are apt to be gibbous. The cutting edges of the crowns of the incisors are without serrations. A disposition exists for recession of the gums from the necks of the teeth.¹

In the local treatment of gouty sore throat, it is only necessary to remember that all agents must be soothing in character. Operative procedures are not well borne. If they are demanded, they must follow the use of general remedies.

The constitutional treatment of gout need not be entered upon here. As is well understood, no single plan is adapted to all cases. In the main, preparations of colchicum can be relied upon to assuage the disease, careful attention being directed to the digestive and urinary functions. Most of the cases are improved by omitting meat from the dietary. Sweet wines and spirits are to be avoided.

CASE I. Irritable pharynx, associated with neuralgic pains of gouty origin.—Miss A. B., aged forty-five, reported through the courtesy of Dr. James Tyson, March, 1888, complaining of neuralgic pains in the muscles of the side of the neck, a burning sensation in the tongue, and constant pain in the ears. The hearing was normal, and the tympanic membranes were healthy. The pharynx was excessively irritable, and very susceptible to the presence

¹ Ibid., p. 47.

² I have examined Lasègue's Clinical Memoirs, but do not find this case. Neither is it contained in E. C. Lasègue's *Traité des Angines*.

¹ Fothergill (*Vaso-renal Changes versus Bright's Disease*, 1887, p. 85) describes the gout-tooth as "worn down and blunted at the edge; at first slightly, subsequently till they look more like pegs than edge-cutting instruments."

of hot fluids; the amount of heat required to warm the rhinal mirror would cause complaint, if by chance the edge of the instrument touched any part of the pharynx. The basi-lingual glands were large. The base of the tongue was occupied by a persistent white fur. The patient had suffered from attacks of aural and pharyngeal pains for several years; they were always worse during the inclement March season. The teeth were large, of a yellow color, but no more worn than might be expected at forty-five years. The patient was a sufferer from atonic dyspepsia. Gout had been in the family on the paternal side through a number of generations. The father had been for years a sufferer and a confirmed invalid from this cause. The pains yielded promptly to the exhibition of colchicum, after they had resisted all other treatment.

CASE II. *Catarrhal pharyngitis and retained tonsil-secretion in a subject of gouty inheritance.*—Mr. C. D., aged thirty-four, was referred to me in February, 1888, by Dr. D. Murray Cheston. She had suffered for five years from a sensation of "throat-closing," which was due to mucus collecting in the nasopharynx and passing down over the lower portion of the pharynx. Additional sources of irritation existed in an abnormal state of the tonsils. The patient had had in all four attacks of catarrhal laryngitis, and was liable to distressing cough when walking against a high wind. The pharynx was very red and irritable, but not swollen. The tongue was moderately furred at the base, but clean for the most part. The tonsils were not enlarged, but of firm consistence. The right tonsil was concealed.

After a treatment of three weeks, the case not progressing satisfactorily, an inquiry was made into the family history, when a gouty history was traced through both maternal and paternal lines. The teeth were observed to be large and firm, and of the characteristic gouty type. The lateral borders of the central maxillary incisors were unusually thick. The lateral maxillary incisors were congenitally absent. Out of six members of her immediate family this peculiarity was noticed in four.¹ Wine of colchicum was now administered, but interfered with digestion. The bowels were kept soluble by sulphate of magnesia. Lithia water was ordered, the diet guarded. Improvement soon was announced. The treatment was interrupted by a general catarrhal attack with fever, during which the family physician, following up the treatment, administered the bromide of lithia.

Upon reporting for further local treatment the condition was found greatly improved. The cause of local pharyngeal tenderness was now carefully inquired into and a number of tonsil-pellets dislodged from both tonsils. The pharyngeal tenderness disappeared soon after these explorations.

Mrs. D. is now recovered from the throat ailment

¹ The absence of the permanent lateral incisors of the upper jaw has been associated so frequently by the writer with constitutional impression that it may be included among the minor signs of a gouty, syphilitic or strumous state.

—the "closing" sensation has disappeared. She has been comfortable during our recent trying spring weather.

The following case illustrates the most common form of gouty sore throat—namely, a form in which the gouty habit is conjoined with a moderate amount of indulgence in the pleasures of the table.

CASE III. *Pharyngitis in a male subject of gouty habit.*—Mr. A. T., aged forty-five, a lawyer by profession, of gouty inheritance, suffered from continuous sore throat. The parts were red, moderately swollen, and excessively irritable. The tonsils were small but hard, the right body being retroverted. The voice was husky, and the patient annoyed by futile efforts to clear it. The patient was liable to attacks of herpetic tonsillitis. The habit was full, the trunk large, and the neck short. The teeth were not characteristic. The patient was aware of the nature of his distress. He was always worse after times of more than usual indulgence, when he would experience pain in the right toes. He was restless under the restrictions of treatment, and after remaining under care for a few weeks, ceased to report.

CASE IV. *Chronic nasal catarrh and acute pharyngitis in a male subject who suffered from acquired gout.*—Mr. G. H., aged fifty-five, reported in September, 1880, has suffered from attacks of gout in the feet for fifteen years, which have always yielded to "Lavilles' gout fluid." The patient had an attack in January. The duration of the nasal catarrh was about eighteen months. For one week before reporting he had an acute sore throat with an attack of coughing. The catarrh was much better than was usual and the sore throat appeared to have no connection with it. The sore throat was associated by the patient with the gout.

The throat structures were purplish-red in color and oedematous; a line of gray infiltration was distinguishable on the sides of the uvula. The sense of smell and taste were slightly impaired. The appearances within the nasal chambers were characteristic of chronic nasal catarrh. The treatment consisted in reducing the size of the intumescent membranes. They presented no features which need be recorded.

CASE V. *Pharyngitis in a male subject who was syphilitic and at the same time gouty.*—Mr. I. J., aged thirty-six, reported in January, 1879. He was a lawyer by profession, and had a history of inherited gout, and had suffered from three acute attacks involving the great toe of the right foot. He is also a sufferer from hay-fever. The gums were receded from the necks of the teeth. He had an abscess in the right maxillary sinus two years ago. In 1868 the patient had synovitis of the shoulder, the knee of the left side, and the right toe which was probably of a syphilitic nature. He had a lesion of constitutional syphilis in the form of a small serpiginous ulcer on the roof of the mouth beginning near the first bicuspid tooth of the right side, extending to the middle line, and thence deflected along the raphe to the middle of the hard palate. The ordinary appearances of chronic nasal catarrh and pharyngitis were present.

VESICAL CALCULUS WITH CHYLURIA.¹

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I AM led to report the following case of vesical calculus in a female because of the features of unusual interest which it presented.

Mrs. J. S., aged nineteen, of Italian birth, but now residing in this city, felt very ill after her first confinement in July, 1887. She complained greatly of pain in her back, and was rapidly losing strength. An irregular Italian practitioner was first consulted, who pronounced the case one of kidney disease.

About the 20th of September, 1887, she having become very weak and discouraged, Dr. A. A. O'Daniel, of this city, was requested to take charge of her case. He found her confined to her bed, in a feeble condition, and unable to take sufficient nourishment. She was occasionally affected with vomiting. There existed a painful spot over the left kidney, decided tenderness in the region of the ovary of the same side, and pain which ran down the inside of the corresponding thigh to the knee. An examination *per vaginam* revealed nothing abnormal about the uterus or its appendages. She stated that she "passed milk from her bladder instead of urine." The specimen which was obtained had the appearance of milk. When it was allowed to stand twenty-four hours, it presented the same peculiar appearance as before. No sediment was noticeable. By repeated examination a small amount of pus was found, but by no means sufficient in quantity to account for the emulsive character of the urine, which, after standing for several days, showed a scum on top. Upon agitating the urine with ether a quantity of fatty matter was separated, leaving the residue comparatively clear.

The case was now regarded as one of chyluria, and acting upon this diagnosis Dr. O'Daniel administered thirty grains of gallic acid daily, with very satisfactory result. The urine became almost clear, but if the drug was omitted for a day, its milkiness would return, and when, on account of an irritable condition of the stomach, the use of gallic acid was for a time discontinued, the urine became so thick that it could scarcely be voided, and the pain in the back increased in severity.

By the administration of diuretics and the application of counter-irritants to the back at this time, a degree of relief was afforded, but the urine remained milky. The patient's temperature at different periods ranged from 99°-102° F. Gallic acid was again resorted to, but in small quantity, and with an occasional dose of quinine. The urine thereafter presented somewhat different characters from those which had been noticed before. On standing four or five hours its emulsive character was less thoroughly preserved, and its constituent parts began to separate.

Dr. James Tyson saw the case in consultation, on October 26, 1887. The patient's temperature was then 102°, and the urine slightly milky. A speci-

men which had stood from the previous night contained some deposit and showed only slight turbidity. The possibility of the existence of filariæ having been discussed, a few drops of blood were taken from the woman's finger for microscopic examination, but no filariæ were found. Pus was detected in the urine.

When the gallic acid was again discontinued, the urine once more became so thick that it could be passed only with difficulty, and now showed an increased quantity of pus.

When, for the first time, the medical attendant by means of a double current catheter washed out the bladder with a solution of boric acid, he was surprised to discover a stone of large size in that viscus. Tonics were administered and the bladder was washed out daily with the above-named solution.

On November 28th, the patient being a little stronger and the urine having become almost clear, I removed the stone, assisted by Drs. O'Daniel and J. B. Deaver, the latter giving the ether. The urethra was dilated sufficiently to allow the introduction of the index-finger, which came in contact with a calculus too large to be removed unbroken through the natural canal. A pair of forceps was introduced through the dilated urethra, and a portion of the calculus crushed off. On reintroducing the finger, the bent end of a hairpin about an inch in length was felt among some broken debris of the stone. A little delay was occasioned in extracting this forked-shape wire without lacerating the bladder or urethra. A number of stony fragments were removed, and the bladder well washed out. But some difficulty was now experienced in bringing away an olive-shaped fragment measuring an inch and a quarter in length and three-quarters of an inch in its greatest diameter, and having running through it lengthwise one of the wire prongs of the hairpin, two and a quarter inches long. The free or projecting ends of the wire were buried in the coats of the bladder holding fast the remaining large fragment of the stone, of which the wire formed an elongated nucleus.

By an examination through the vagina, one of the points of the wire buried in the tissues could be readily felt. With only the index-finger in the bladder, this end of the hairpin was disengaged and brought toward the urethra, through which by means of forceps it was extracted with its stony accretions still fastened about it.

The patient recovered well from the effects of the ether and the shock of the operation. On the first evening her temperature rose to 102°, but sank on the following day to 99°, and did not again rise. In a very few days she was able to retain her water perfectly. She was kept in bed for ten days; in a few weeks she gained forty pounds in weight, and has since remained entirely well.

The stone, including all the fragments and lesser debris, weighed five hundred and forty grains. It was composed of mixed phosphates, urates, and fat.

No information could be gained from Mrs. S. as to how or when the hairpin got into her bladder. From her mother it was learned that the patient began complaining of pain in her back and of feeling

¹ Read before the Philadelphia Academy of Surgery.

ill about four years before her marriage, but that no particular discomfort was complained of during her pregnancy.

In regard to the diagnosis of chylous urine in this case, I would add that, after repeated conversations with the medical attendant on that point, I cannot but adhere to its correctness. In this I am strengthened by the report of a chemical analysis of the calculus, made by Dr. Lawrence Wolff, in which he states that he found fat; which was a substance he had failed to find in the examinations of numerous other vesical calculi, although it was fair to assume that some of the patients from whom they had been taken had had pus in their urine.

The only explanation I can offer for the existence of the chyluria is that the lymphatics of the bladder were wounded by the points of the hairpin, and that a lymphatic varix may have existed, causing a direct leakage from that system and producing a non-parasitic chyluria.

MEDICAL PROGRESS.

A Case of Complete Recovery after Removal of the Larynx.

—The Paris correspondent of the *Lancet* writes in that journal of April 28, 1888, that at No. 22, Rue de la Banque, Paris, may be seen a man (a wine merchant) who has been living without a larynx for the last two years. In April, 1885, he consulted Dr. Fauvel, the celebrated laryngologist, on account of severe dyspnoea, to which he had been subject for some time. Dr. Fauvel diagnosed an osteosis with edema and ulceration of the larynx, and proposed to perform tracheotomy on the man. This he refused to submit to, and consulted other physicians; but, as he was getting worse and the danger of suffocation became imminent, he decided upon the operation. Tracheotomy was practised on February 13, 1886; but, as this did not afford much relief, Dr. Péan on February 27th—that is, a fortnight afterward—performed ablation of the larynx. This was done at the hospital, and on March 19th he was able to eat, and left the hospital cured and apparently in good health. As newspaper reports of medical cases are not always very correct, I resolved to call at the residence given, and verify the statement published. I saw the man in his shop (a public-house), serving his customers as if nothing had happened to him. He is thirty-seven years of age, but looks about fifty. At my request he very willingly showed me his throat, where I perceived the canula which was introduced by Drs. Péan and Fauvel, and whenever he had to answer my questions he closed the orifice of the canula with his finger, and, although his voice was not very audible, yet he spoke distinctly. He has not changed his habits, but eats and drinks as much as he ever did. As far as I could learn, the man had no antecedents of syphilis or tuberculosis, but had been frequently treated for "colds on the chest."

Rattlesnake Bite Successfully Treated by Permanganate of Potassium.—GASTON, of Atlanta, reports the following case in the *Brooklyn Medical Journal* for May, 1888: As

the patient placed his hand on a crate he felt a stinging sensation in one of his fingers, and saw that a huge snake had fastened its fangs in his flesh. In a few seconds the hand and arm began to swell, and he was brought to Dr. Gaston's office. On examination, he found that the fang of the snake had penetrated the anterior portion of the end of the third finger, and a ligature was tied tightly around the finger below the first joint immediately, which strangled the circulation. The patient came directly to the office, only a few blocks off, and so soon as a solution of permanganate of potash, grs. ij. in distilled water, f3j, could be made by the nearest druggists, the quantity contained in an ordinary hypodermatic syringe was injected, by passing the needle through the orifice left by the fang. The ligature was then released, and the patient made great complaint of the pain in the part, from the medication, for a few minutes. There was a dusky, ashy hue extending around the point where the injection penetrated, which gradually passed away, and in the course of fifteen minutes there was no further notable effect of the bite or of the injection. His brother reported that some swelling of the finger and arm occurred during the following day, but it was not requisite to visit him again. It is stated that the patient took aqua ammonia in doses of fifteen drops every hour during the afternoon of the bite, but there were no indications of the effects of the poison requiring this remedy, and it was only used from prudential considerations.

Tannin for Burns of the First Degree.—MIKALSKY uses tannin in burns of the first degree, as follows:

Tannin,	
Alcohol	āā 3 i
Ether. sulphuric.	3 7½

For local application.—*Revue de Thérapeutique*, May 1, 1888.

Kephir, as Infant Food.—TAYLOR reports, in *The Archives of Pediatrics* for May, 1888, his use of kephir among children as follows:

1. If the infant is less than a month old, give it diluted one-third with water. This proportion may be gradually lessened until at from four to six weeks of age it is given undiluted.
2. It should be fed slowly from a simple, easily cleansed nursing-bottle.
3. When used, it should constitute the only food, except in children over a year of age, when crackers, toast, etc., may be given with it, and one meal a day can with advantage consist of oatmeal mush or other farinaceous food.
4. For young infants it is best adapted when given in its young or weak state. As the child grows older the medicine or even the old kephir may be used.

Its greatest usefulness is in cases of infantile atrophy and of chronic diarrhoea, and it will undoubtedly prove to be a valuable addition to our resources in the care of hand-fed infants.

A New Antiseptic Soap.—The *Lancet* of May 12, 1888, writes that until quite recently a satisfactory soap containing an antiseptic one of the salts of mercury has been difficult to prepare on account of the alkaline soap

refusing to yield a good lather, oleate of mercury being formed—a compound which has little or no germicidal action. One of the most powerful antiseptics of the mercury salts is, as is well known, the bichloride. Moreover, it is cheap, and easily soluble, but it has the disadvantage of being extremely poisonous and easily reduced by albuminoid matter, with which it combines, thus being rendered inactive. In a paper recently read before the Society of Chemical Industry, in Glasgow, by John Thomson, the solubility of the red biniodide of mercury (which is claimed to be even a more powerful antiseptic than the bichloride) in iodide of potassium has been made use of. A soap can thus be easily prepared containing a certain proportion of the biniodide in a soluble form. It is stated to be permanent, having no tendency to separate, and to be more germicidal in its properties than any other antiseptic soap yet known. Experiments were made to demonstrate this. Sterilized silk threads were suspended in a solution of the biniodide soap for ten minutes, after being saturated with solutions containing well-known microorganisms, amongst which were the streptococcus scarlatinæ (Klein), bacillus subtilis, orange sarcina, white bacillus from Tweed water, organisms from putrid urine, the micrococcus of osteomyelitis, aspergillus nigrescens, spores from various fungi, yellow micrococcus from pus, putrefactive organisms, bacterium termo, and bacillus scarlatinæ (Edington). The threads were then carefully washed to remove the soap, and placed in sterilized gelatine in the ordinary way. The threads were controlled by first sterilizing, and then plunging into nutrient gelatine; if no growth occurred, they were accepted as being fit for use in the experiment. Washing the threads previously contaminated with organisms two or three times carefully with distilled water was shown by experiment not to remove the organisms, for on being placed in the gelatine, growth readily took place. The results, as shown in tables, are very remarkable. In all the experiments, with a few very uncertain exceptions, growth of the organisms was completely prevented, even after the lapse of four days. Similar experiments made with "carbolate of mercury" soap showed it to be less powerful as a disinfectant, and much slower in its germicidal action. In experiments carried out in the same manner with other antiseptic and ordinary soaps, it was shown that the growth of the organisms in many cases was not prevented. The importance of such a soap in medical and sanitary science is very obvious. The biniodide soap has been used in the treatment of eczema with well-marked success, especially where the irritation is due to the fermentations of accumulated secretions, the fermentation being set up by microorganisms. It has also met with similar success when used in parasitic skin diseases, such as favus and ringworm. As a parasiticide, too, the importance of its application to patients during the period of desquamation in scarlet fever is evident.

Hydrofluoric Acid in Pulmonary Phthisis.—DR. DE GIACOMI, of Berné (*Correspondenz-Blatt für Schweizer Aerzte*, March 1, 1888, p. 142), has tested the treatment in eight advanced cases of his own. He simplified the Seiler-Garcin method in so far that a mixture of one hundred grammes of fluorine hydrogen with three hundred grammes of water was heated in an open leaden

vessel by means of a spirit lamp. The patients sat around the vessel and inhaled the vapors for an hour daily. Dr. de Giacomi's experience was not so favorable as that of the French observers. In six of the eight patients the result was absolutely negative; in a seventh some temporary improvement of appetite and decrease of dyspnoea were observed; in the remaining case a striking relief of all symptoms ensued after the very first sitting. The author, however, reasonably enough, hesitates to attribute such an extraordinary and sudden change to the treatment employed; the improvement might have been purely accidental. At all events, he thinks that the method deserves a further and more extensive trial. The inhalation does not cause any discomfort to the patient. The only drawback which he mentions is that window-panes gradually become opaque under the influence of hydrofluoric vapors. As the acid has a violent caustic action on the skin, Dr. de Giacomi recommends the utmost caution in manipulations with the solution. Dr. Collon employed the method in two cases of advanced tuberculosis with high fever and extreme emaciation, and did not see any good beyond some amelioration in respect of sleep.—*British Medical Journal*, April 28, 1888.

An Anæsthetic for Minor Operations.—The *Revue de Thérapeutique* of May 1, 1888, gives the following convenient mixture:

Chloroform,	
Spirits of wine,	
Cologne water	equal parts.

To be inhaled for transient anæsthesia.

Micro-organisms in Surgical Wards.—At the last Congress of Italian Surgeons, DURANTE reported experiments performed, at his suggestion, by his assistant, to determine the presence of germs in the air about the bed of a surgical patient, and in the ward. It was found that the greatest number of germs were present about forty inches above the borders of the bed; in all other directions the number of germs greatly decreased. Culture materials placed beneath the bed and about the bottoms of the neighboring walls, remained frequently sterile. The germs most frequently found were *staphylococcus aureus*, *streptococcus of erysipelas*, and Fränkel's *pneumococcus*.—*Deutsche medicinische Wochenschrift*, May 3, 1888.

A Simple Operation for Lacerated Cervix.—HERRICK, in the *Medical Record* of May 26, 1888, reports a simple method of closing a lacerated cervix as follows:

The lacerated edges of the cervix are denuded as usual, care being taken that they are properly coapted; then, instead of introducing sutures, a wide elastic rubber band, shaped like the cervix, and large enough to cover the whole os and neck, with the exception of a hole in the end for the secretions to pass through, is slipped over the os, while the lacerated edges are held together by a pair of tenaculum forceps, over which the band is first passed; the band being wide and covering the whole neck, it keeps up equal pressure upon the bloodvessels, thus preventing enough blood getting into the parts at any one time to produce inflammation or swelling, and, as a natural sequence, union takes place much sooner than it otherwise would. The introduction

of sutures is often followed by inflammation, and when suppuration follows there is non-union, which is prevented by the use of the elastic band.

The advantages of this method are: 1. As about all the pain experienced during the operation is from the introduction of the sutures, if they are not introduced there is little pain, and hence an anæsthetic may be dispensed with. 2. If the patient is not etherized it is not necessary to have professional assistance, and one can operate on patients that would not listen to such a proposition if strange physicians were to be present. 3. The parts are kept in just as close contact, and union takes place just as soon. 4. There is less danger of inflammation. 5. There are no stitches to remove. 6. In slight cases patients can be operated upon without their being obliged to keep their beds for a single day, or their knowing they are undergoing an operation.

Cerebral and Spinal Abscess Successfully Drained.—RUGGI, at the Congress of Italian Surgeons, reported two interesting cases, as follows:

The first was that of a healthy workman, aged twenty, who received a severe blow upon the left parietal region, followed by paralysis of the right arm, and later, by convulsions. Craniotomy revealed a splinter from the internal table of the skull perforating the dura mater; the brain was contused, and blood and pus were evacuated. The case progressed to comparative recovery without fever.

The second case was one of præ-vertebral abscess in the region of the ninth and tenth dorsal vertebrae. Ruggi resected a sufficient number of ribs, removed the transverse process of a vertebra, and evacuated pus and a fragment of bone from the vertebral canal. Recovery followed.—*Deutsche medicinische Wochenschrift*, May 3, 1888.

A Prescription for Sea-sickness.—ROUQUETTE prescribes:

Antipyrin.	gr. 75.
Cocain. hydrochlorat.	gr. 1½.
Caffein.	gr. 4.
Strych. sulphat.	gr. ⅓.
Cognac	3 2½.
Aquæ destillat.	ad 3 25.

A teaspoonful before embarking, followed by two during the twenty-four hours: when at sea, three teaspoonfuls daily.—*Revue de Thérapeutique*, May 1, 1888.

Anatomical Differences in the Perinea of White and Colored Women.—DR. RAFAEL WEISS, writing in the *Revista de Ciencias Medicas* of Havana on the different position occupied by the vulva in white and colored women, states that, according to his measurement, made on colored multiparæ, the average distance from the coccyx to the fourchette is 2.18 inches, and that between the fourchette and the symphysis 2.65 inches, the anus and fourchette being 0.7 of an inch apart. Comparing these with the measurements given by Föster for European multiparæ—viz., 2.8, 1.8, and 0.8 inches,—it is evident that the vulva occupies a distinctly lower position amongst negroes than it does amongst Europeans. Dr. Weiss's own measurements of Europeans do not differ very widely from Föster's. A very low position he found quite exceptional, amongst white women, while a very

high one was not uncommon, the coxi-vulvar distance being in some cases as much as 3.4 inches. With women of unmixed negro blood, on the other hand, he never saw a case where the position was high, though it was sometimes so low that the fourchette occupied the position usually held by the anus in white subjects. The consequence of these differences is that in colored women the period of perineal distention in parturition is much shorter and easier than amongst white women.—*Lancet*, May 5, 1888.

Smokers' Vertigo.—DR. DECAISNE recently investigated a number of cases of vertigo in smokers. Out of sixty-three patients, forty-nine were between fifty and sixty-six years of age. More than half of them suffered in addition from digestive troubles, with constipation alternating with diarrhoea, insomnia, palpitations, dyspnœa, and diuresis. In a third of the number there were marked intermittence of the pulse and granular pharyngitis, while others suffered from aphthæ, amblyopia, etc. Thirty-seven were persons who smoked habitually on an empty stomach, and these suffered from vertigo, principally in the morning. The vertigo generally coincided with suppression of perspiration and diminished excretion of urine. The treatment consisted mainly in regulating or suppressing the cause, but thirty-three out of thirty-seven patients ceased to suffer on merely refraining from smoking on an empty stomach.—*Medical Press*, April 25, 1888.

Repeated Typhoid Fever.—EICHHORST has collected the statistics of 666 cases of typhoid, treated at Zurich during three years time. He found that a second attack occurred in 4.2 per cent. (twenty-eight persons). Susceptibility to typhoid infection was not destroyed by a first or second attack; cases of three and four times repeated infection were observed. The mortality of repeated attacks was the same as those of first illness, and the severity of the symptoms was the same. Men are more liable to repeated attacks of typhoid than women.—*Correspondenz-Blatt für Schweizer Aerzte*, May 1, 1888.

Antipyrin Locally in Gonorrhœa.—AUDHOU prescribes:

Aq. rosæ,	āā 3 3¼.
Aq. lauro-ceras.	gr. 75.
Antipyrin.	gr. 75.
Zinc. sulphat.	gr. 7½.

For urethral injection.—*Revue de Thérapeutique*, May 1, 1888.

Potassium Locally in Diphtheria.—MASON, in the *Brooklyn Medical Journal* for May, 1888, writes that a solution of permanganate of potash, used in the form of a spray through the atomizer, has given him more satisfaction and better results than any other drug so used. A stock solution is prepared of potas. permanganate, 3ij to distilled water 3iij, or grs. v to 3j; 3j of the solution is added to about 3jss or 3ij of water, the average capacity of the atomizer bottle. It is then ready for use as a spray, in the manner already indicated.

The first notable effect is the almost immediate arrest of the fetor exhaled by the patient; and when once this is corrected and the disinfection properly kept up, it will not recur during the treatment.

The Disinfection of Rooms Occupied by Infectious Cases.—SWEETING, Superintendent of the Western Fever Hospital, Fulham, describes his method of disinfection as follows; The wards of this hospital, the walls of which consist partly of brick piers and partly of corrugated iron lined by felt and matchboard (in that order from without inward), have over and over again been used, after disinfection, successively for smallpox and for febrile diseases of various kinds—e.g., scarlet fever, measles, diphtheria, enteric, etc. In no case whatever has the preceding disease affected the new occupants of the ward. The plan consists in free fumigation by nitrous fumes (produced by the action of nitric acid on copper filings), followed by thorough cleaning by carbolic soap and water of all wood and iron work, and by distempering the brick portion of the wall of the ward.—*Lancet*, May 5, 1888.

The Treatment of Fissure of the Anus.—CRÉQUY has secured good results by instructing his patient to empty the bowels thoroughly by injections every morning, after which the surgeon lays in the fissure in the mucous membrane of the anus a pledget of lint soaked in a solution of chloral, one to five. This remains until it is expelled when the bowels move on the following morning, when another is inserted.—*Gazette de Gynécologie*, May 1, 1888.

Jambul in Diabetes.—OLIVER reports, in the *Lancet* of May 5, 1888, his use of jambul as follows:

Jambul was recommended a few months ago as a cure for diabetes mellitus. The powdered seed was credited with having the property of diminishing the secretion of urine and of arresting the formation of sugar. Four patients suffering from diabetes have been treated by me with powdered jambul. I began with five-grain doses thrice daily, and gradually increased the dose to fifteen grains. Two of the patients died, both from coma; the other two are still alive, but are no longer taking the drug. It cannot be said that any one of them received the slightest benefit. The daily amount of sugar passed out of the system was not diminished, thirst was not in any way abated, the daily discharge of urine remained as before, and the weight of the body was not increased. In one of the cases, strange to say, two days after taking the jambul the daily elimination of sugar fell from 4000 to 600 grains, but on the following and succeeding days the amount rose, and by degrees increased until it reached the sum eliminated before the drug was administered. Arterial tension was not in any way affected by the drug.

Tolerance of Bacteria by the Lining Membrane of the Uterus.—STRAUS and TOLEDO, at a recent meeting of the Academy of Sciences of Paris, reported experiments upon animals of various species, which had recently given birth to young by normal parturition. They introduced into the uteri of such animals large numbers of microbes ordinarily pathogenic to them, but with infection. Only the microbe of chicken cholera proved infective. The experimenters offered no explanation of this interesting phenomenon.—*Gazette Hebdomadaire*, April 20, 1888.

The Treatment of Enlarged Prostate by Electrolysis.—At a recent meeting of the Berlin Medical Society, CASPER reported cases of hypertrophied prostate treated by electrolysis, by the following method:

He first experimented upon animals to determine whether the destruction of the tissue of the prostate would cause disturbance in the animal's general health. Finding that electrolysis upon these tissues was followed by no ill effects, he operated upon four patients by placing a broad electrode from a battery of twelve cells, furnishing the constant current, over the pubes; a point for puncture was selected by examining the prostate by the finger in the rectum, and a needle was introduced into the prostate through the rectal wall. The needle was connected with the negative pole of the battery, and a current of from ten to twenty-five milliamperes was passed. Without withdrawing the needle from the rectal wall, Casper inserted it into three points in the prostate; the operation lasted fifteen minutes, and, as the needle was carefully insulated, no damage was done to the rectal and surrounding tissues. Of the four patients so treated, two were much improved; one was not influenced by the treatment, one was injured by defective insulation of the rectal needle.—*Deutsche medicinische Wochenschrift*, April 26, 1888.

Phenacetine.—SUCKLING, in the *British Medical Journal* of April 28, 1888, reports his experience in the use of phenacetine as follows:

During the past three weeks I have been using this drug as an antipyretic, and I can confirm Dr. Bell's statement as to its efficacy. I find that it is quite equal to antipyrin, but it is not nearly so powerful as antifebrin.

Phenacetine in moderate doses is not followed by any disagreeable after-effects. Antifebrin, on the other hand, causes profuse perspiration accompanied with great depression and should be given with care, not more than five grains at a time to an adult. Rigors occur after both antipyrin and antifebrin, but I have not yet observed them after phenacetine.

From five to ten grains of phenacetine may be safely given to an adult and frequently repeated. It reduces the temperature considerably in two or three hours, but the reduction is a very transient one, lasting a few hours only.

I consider sponging with tepid or cold water to be far more effective and agreeable than any of the antipyretic drugs, and it not only reduces the temperature but it relieves thirst, induces sleep, and is agreeable to the patient.

Abdominal Pressure in Hysteria.—DR. A. M. DOKHMAN, in a note communicated to the *Russkaya Meditsina* on the arrest of hysterical paroxysms by pressure on the "ovary," points out that the treatment is by no means new, as blows on the abdomen used to be administered by means of iron instruments in the Senmedarski epidemic, and were employed very largely by Goltz as early as 1727. He suggests that, although pressure is made over the region of the ovary, it does not appear that the ovary has much to do with the effect produced, for similar pressure is efficacious where no ovary exists—that is to say, in male patients. He is disposed to compare the effect to that produced by compression of the carotid artery, which will sometimes arrest a paroxysm, and he suggests that the sudden stimulation of the splanchnic nerves may produce an alteration in the vasomotor relations, and in this way may cause the arrest of the paroxysm.—*Lancet*, April 28, 1888.

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THE ORIGIN OF TYPHOID FEVER IN HOSPITALS.

HOLDING, as we firmly do, that certain of the infectious diseases can, in the course of time, be "stamped out," we hail with satisfaction every carefully worked-out contribution to preventive medicine. The study of familiar diseases from the standpoint of etiology is, as yet, far from attracting the attention it merits among sanitarians and pathologists. To the profession at large it is too often a matter of curious theoretical speculation, rather than a subject of every-day, practical application.

Etiological investigations, to yield full results, must include not only the life-history of the *contagium*, but also, to the minutest detail, the mode of the *contagion*. The acquisition of this kind of knowledge, and its general acceptance by practitioners and the people, will render scarlet fever and variola as rare in well-ordered communities as the plague now is in Western Europe, and keep the cholera east of Suez.

Especially do these remarks apply to typhoid, the great fever of the present historical era, the endemic, acute, infectious disease of modern civilization. This is a disease the spread of which can be absolutely controlled by the systematic, routine application of the simplest rules of disinfection. Not only in theory but in practice is it within the power of the physician to prevent any individual case under his care from becoming a focus of contagion, and to destroy the infecting principle definitely and finally.

The rigid application of preventive measures to every case, and the detection and eradication of foci of contagion outside the human body, would soon lead to the extinction of typhoid fever in the most gravely infected locality.

Fitz has recently made a critical investigation of eleven cases of typhoid fever, of which seven probably, and four possibly, originated in the Massachusetts General Hospital in the course of six years, from 1882 to 1887 inclusive (*Boston Medical and Surgical Journal*, May 24, 1888). While the evidence of infection within the hospital is in none of these cases absolutely conclusive, it warrants the fear that familiarity has bred contempt for a danger that is real, and that we may be less habitually careful in guarding the medical officers, ward assistants, nurses, servants, patients and laundry workers against typhoid infection than the facts demand. The Massachusetts General Hospital, however, affords in these cases an experience widely at variance with that of other institutions. Hutchinson, whose article in the *System of Medicine* is referred to by Fitz, saw only one case of typhoid originate in hospital in twenty-four years: Murchison has collected, in his *Treatise on the Continued Fevers*, an imposing array of facts and testimony as to the infrequency of ward contagion. Liebermeister, in an enormous experience, has seen no case develop in hospital, except such as were attributed to defect in drainage.

The "special directions in typhoid fever," suggested by Fitz and his colleagues, are worthy of general adoption. They are as follows:

"1. Mattresses and pillows (when liable to become soiled) are to be protected by close-fitting rubber covers.

"2. Bed and body linen are to be changed daily. Bedspreads, blankets, rubber sheets and rubber covers are to be changed at once when soiled. Avoid shaking any of these articles.

"3. All changed linen, bath-towels, rubber sheets and covers are to be immediately wrapped in a sheet soaked in carbolic acid (1:40). Remove to the rinse-house as soon as possible, and soak six hours in carbolic acid (1:40). Then boil the linen for a half hour, and wash with soft soap. The rubber sheets and covers are to be rinsed in cold water, dried and aired for eight hours. The bedspreads and blankets are to be aired eight hours daily.

"4. Feeding utensils, immediately after being used, are to be thoroughly cleansed in boiling water.

"5. Dejections are to be received into a bed-pan containing half a pint of carbolic acid (1:20). The nates are to be cleansed with paper and afterward with a compress-cloth wet with carbolic acid (1:40).

"6. The bed-pan and cloths are to be carried to the tower. Add two quarts of carbolic acid (1:20) in divided portions to the contents of the bed-pan; mix thoroughly by shaking, and throw the liquid into the hopper. The bed-pan and hopper are to be cleansed with carbolic acid

(1 : 20), and wiped dry. The cloth used for the above purpose is to be at once burned.

"7. The corpse is to be covered with a sheet wet with carbolic acid (1 : 40).

"8. After the discharge of the patient from the hospital, the mattresses are to be thoroughly beaten and aired every day for a week. The bedstead is to be washed with corrosive sublimate (1 : 1000).

"9. These directions are to be followed until the patient is free from fever."

These rules, if carefully observed, would save much pecuniary loss, suffering and life. Useful as they would be in hospitals, their greatest value would be shown in private practice. The way to escape danger is not to ignore it, but to recognize it, proclaim it and intelligently guard against it.

AN ADVANCE IN MEDICAL EDUCATION.

In his recent address, as President of the American Medical Association, Dr. Garnett proved from the statistics collected by government, what ought to be conceded without argument, that medical colleges exacting a graded course of intra-mural study extending over three years, produced better qualified doctors than those requiring but two years of intra-mural instruction. He thought that the Association might take a hand in reforming the two years colleges by a peremptory call upon them to meet in convention and adopt uniformly the higher methods under penalty of exclusion of future two years graduates from membership in the American Medical Association. The plan, however excellent, is impracticable, since a large part of the active membership at each meeting of the Association is made up of teachers in two years schools, who will oppose all mandatory legislation. If the colleges ever convene for this purpose, it must be as the result of pressure from without, from the State Examining Boards, from the medical press, from the general public, including the non-teaching part of the profession.

It is an open secret that during last winter active efforts were made to get the leading medical colleges of Philadelphia and New York to adopt an obligatory three years course. Strange to say, opposition was developed where it was least expected. The school having the amplest facilities for thorough and extended teaching did not feel that this entailed any immediate obligation to lengthen and make more practical an antiquated course of instruction.

It is a pleasure to learn that Jefferson Medical College of Philadelphia has announced its inten-

tion, two years hence, to make an extension of its obligatory, intra-mural instruction to three annual winter sessions. East of the Ohio River but three colleges have taken this step, Harvard, the University of Pennsylvania, and now Jefferson Medical College. To this complexion all the colleges must come at last. The Maryland State Board of Health has announced a medical practice act, which, like that of Illinois, requires a three years course; and the Medical Examiners of California, after April 1, 1891, will not recognize diplomas from schools that do not require attendance on three full regular courses of lectures delivered in three separate years. No half-way house is allowed on the road, no such paltry substitutes as one year of home study from a syllabus will be recognized in these States as anything but a pretence of systematic instruction.

Two years college faculties are made of mortal stuff, and however indifferent they may seem to professional clamor, they cannot much longer keep their god-like serenity. If the unendowed professors of Jefferson Medical College, with their expensive hospital, laboratories and salaried corps of instructors, now, in compliance with the demands of higher education, take this step, it must be with some assurance of professional support. They will doubtless have diminished revenues for a term or two, but with the sympathetic support which the profession and the public have already shown for the cause of improved medical education, their loss will be only temporary, and at the same time the Jefferson school will strengthen its ancient prestige while making troops of new friends.

It is gratifying to find Philadelphia maintaining its old reputation as a centre of medical education, and that its two prominent schools have committed themselves to the cause of improved medical instruction. We hope that they, with Harvard, will not long stand alone in this advance, but that we may soon have the pleasure of also recording that the other leading schools have taken a like step.

CEREBRAL SURGERY.

ON April 30th, Dr. W. W. Keen operated successfully on his third brain case. The patient was a man, aged twenty, who had suffered from epilepsy for seven years. The cause was obscure, but observation of a number of attacks showed that they all began in the left hand, and it was hoped that excision of the hand centre would arrest the attacks.

This centre lay in the post-Rolandic convolution, toward its inferior extremity.

An inch and a half trephine opening was made over the selected spot, and subsequently enlarged to two and a quarter by two and a half inches. Three parallel convolutions were disclosed, and it was difficult to decide which was the post-Rolandic convolution. By the use of a faradic battery, however, the hand centre was readily determined to lie in the anterior of the three gyri. This portion was excised. The membranes were oedematous over all three gyri, though to the eye the brain tissue itself seemed normal. After securing the dura, the trephine button and a number of the smaller fragments were replaced, and suitable drainage employed. The stitches were all removed in five days, the temperature never having risen above 100° F., and on the eighth day the patient was so well that he went out and was shaved. The integrity of the skull is entirely reestablished.

The left hand has been paralyzed ever since, but no other paralysis has followed, thus establishing clearly the localized function of this part of the cortex. The epileptic attacks were at first increased in number, but have so far progressively diminished in frequency and severity. Should the ultimate result be favorable, it will go a long way to encourage such surgical treatment of this distressing malady.

At the meeting of the Pennsylvania State Medical Society held in Philadelphia, last week, Dr. J. B. Murdoch, of Pittsburg, was elected President for the ensuing year. The next meeting will be held at Pittsburg.

THE New Hampshire Medical Society will hold its ninety-eighth annual meeting on Tuesday, June 19, 1888, at 11 o'clock A.M., under the presidency of Dr. S. W. Roberts, of Wakefield.

WE take pleasure in calling attention to a letter from the Port Physician of Philadelphia in reference to the introduction of smallpox into Philadelphia last winter, which appears in another column. He claims that there was no evidence at the time to justify the detention of any passenger on the ship which is supposed to have brought over the first case.

THE State of New York will be the first to make trial of electricity as a means of execution instead of hanging, Governor Hill having, after some delay,

concluded to approve a bill for that purpose, passed by the State Legislature. The bill makes some other changes which are reformatory: the execution must take place at a State prison, and not at a county jail, as formerly; the priestly offices must be private; no farewell speech or publicity of funeral is allowed; the only attendants shall be the specified officers of the law; all parade and ostentation of sympathy are prevented. The law will go into effect January 1, 1889. One feature of the new bill which may be regarded as of doubtful expediency is that the selection of the form of instrument or means through which the fatal current is to be applied to the condemned person is left with the warden in charge of the prison in which the penalty is enforced.

ON May 27th, at the Women's Clinic of the Berlin University, a bust of Prof. Carl Schröder was unveiled with appropriate ceremonies.

IN the *British Medical Journal* of April 14th, Mr. Henry Fenwick gives the history of a case of urinary calculus consequent upon an ovariectomy two years before. The nucleus of the calculus was a silk ligature used in securing the pedicle. One or more ligatures ulcerated their way through into the bladder, causing cystitis and stone. By means of the electric cystoscope, one of these foreign bodies was seen before removal from the bladder.

PROFESSOR LEOPOLD MAX POLITZER, the well-known specialist in children's diseases, died in Vienna on May 23d, aged seventy-four years. A contemporary of Skoda and Oppolzer, it devolved upon Politzer to place his chosen work upon a scientific basis; and, at a time when the Vienna Medical School was in its glory, to nurture his department and give it a worthy position. He was the founder of the *Jahrbuch für Kinderheilkunde* and of the Children's Hospital, now conducted by his former pupil and friend, Kassowitz. Politzer was made a Professor in the University in 1875. By his learning, his humanity, and his modesty, he earned the confidence of the public, as well as the esteem of his colleagues.

REVIEWS.

TRANSACTIONS OF THE BROOKLYN PATHOLOGICAL SOCIETY. SESSION OF 1885-86. A. H. P. LEUF, M.D., EDITOR. New York: D. Appleton & Co., 1887.

THIS handsome and ably edited volume gives evidence of active work on the part of the Brooklyn Path-

ological Society. It contains descriptions of the various specimens in morbid anatomy, many of them of great interest, with abstracts of the discussions thereon. In addition there are a number of formal papers on various subjects of interest in general and special pathology. Judging from the active discussion and criticism these papers called forth, carried out in a truly scientific spirit, they must have been the most valuable and instructive part of the winter's work. As an example of the variety and practical interest of these articles we may mention: 'The Nervous Symptoms of So-called Lithæmia,' by Dr. Landon Carter Gray; 'Some Serious Sources of Error in Studying the Course of Disease,' by Dr. R. G. Eccles; and 'The Pathology of the Lymphatic Glands in Children,' by Dr. Henry N. Read.

CORRESPONDENCE.

QUARANTINE AT PHILADELPHIA.

To the Editor of THE MEDICAL NEWS,

SIR: I beg your indulgence for a few words of explanation in regard to your editorial comment and disquisition upon "Inefficient Quarantine," contained in THE MEDICAL NEWS of June 9th.

He who excuses, also accuses himself; therefore, I shall make a simple statement of the unvarnished facts and legal aspects of the case. Both officers and passengers of vessels have rights which are entitled to respect, in so far as those rights do not conflict with the *public* safety and welfare. The law very distinctly defines that the Port Physician has the right to detain any vessel whose passengers, officers or cargo may offer any evidence of suspicion as to being carriers of contagious disease. Now as to the case in question, and concerning which you have evidently been misinformed, I would say, that the said vessel, reported to have entered this port about February the first, containing a case of smallpox, did not at the time of entry present any evidence of contagious disease, either among the crew or passengers. During my close inspection of the said vessel, its crew and passengers, there was not manifest any symptom, either objective or subjective, to warrant a diagnosis of contagious disease. It may be well, also, to state, that the period of incubation of smallpox varies from five to fifteen days. Furthermore, the vessel presented a clean bill of health; "no sickness on board" attested to, under oath, by the captain and surgeon.

I trust that the above statement will suffice in placing the matter in its proper light, and receive the fair and impartial consideration which it merits.

Very truly,

W. H. RANDLE, M.D.,
Port Physician.

PHILADELPHIA, June 13, 1888.

THE TOXIC SYMPTOMS OF STROPHANTHUS.

To the Editor of THE MEDICAL NEWS,

SIR: On May 22, 1888, I was called to see a female child of five summers, who had thirty minutes previously been given by mistake of the mother *twenty drops* of the tincture of strophanthus hispians.

The face was flushed, lips scarlet; eyes brilliant; elevated temperature; skin dry, tongue normal. Pupils

quivering, dilating and contracting alternately every few seconds; pulse 140, arteries distended; left ventricle contracting with unusual vigor; aortic valves closing with a loud and distinct "tup;" a slight mitral regurgitant murmur; intellect clear. The child was precociously loquacious during the five hours in which the toxic symptoms were apparent.

The treatment was half drachm doses of fluid extract of ipecac with copious drinks of warm water, repeated every ten minutes until the child had vomited five times, then followed with a half drop of tincture of aconite and one drop of the ipecac every half hour until the skin moistened and the pulse became normal. No urine was passed for ten hours after taking the drug.

HORACE Y. EVANS.

PHILADELPHIA, June 11, 1888.

NEWS ITEMS.

The American Laryngological Association announces the following programme for its Tenth Annual Congress, to be held in Washington, D. C., on September 18th, 19th and 20th, 1888:

Ten Years of Laryngology. By Rufus P. Lincoln, M.D., of New York.

Congenital Bony Occlusion of the Posterior Nares. By Charles H. Knight, M.D., of New York.

The Effects of varying Rates of Stimulation on the Action of the Recurrent Laryngeal Nerve. By Franklin H. Hooper, M.D., of Boston.

Subglottic Laryngeal Enchondroma. By E. Fletcher Ingals, M.D., of Chicago.

A Photographic Study of the Laryngeal Image during the Formation of the Registers and Production of Variations in the Pitch of the Singing Voice. By Thomas R. French, M.D., of Brooklyn.

Lupus of the Nose, Pharynx and Larynx. By Samuel Johnston, M.D., of Baltimore.

Imaginary Lingual Ulceration. By George M. Leferts, M.D., of New York.

A Possible Substitute for Tracheotomy and Intubation in certain Cases. By Edgar Holden, M.D., of Newark.

Antiseptic Nasal Surgery. By Clarence C. Rice, M.D., of New York.

A Case of Sarcoma of the Tonsil. By Alexander W. Mac Coy, M.D., of Philadelphia.

A Case of Subglottic Chronic Stenosis of the Larynx Cured by Dilatation. By Frank Donaldson, M.D., of Baltimore.

Internal Esophagotomy. By John O. Roe, M.D., of Rochester.

The Treatment of Atrophic Rhinitis by the Galvanic Current. By J. H. Hartman, M.D., of Baltimore.

The Anatomy of the Nasal Chambers. By Harrison Allen, M.D., of Philadelphia.

Notes on a Case of Nasal Caries, complicated with Meningitis; successfully treated by means of a Surgical Drill. By William C. Jarvis, M.D., of New York.

On Fixation of one or both Vocal Bands in the Phonatory Position. (So-called Abductor Paralysis.) By F. Donaldson, Jr., M.D., of Baltimore.

Residence at certain High Altitudes as a means of Cure for Laryngeal Phthisis. By Clinton Wagner, M.D., of New York.

Further Investigations as to the existence of a Cortical Motor Centre for the Human Larynx. By D. Bryson Delavan, M.D., of New York.

Besides the above titles, papers have been promised by Drs. Morris J. Ash, J. Solis-Cohen, John N. Mackenzie and Beverly Robinson; and by Dr. A. Gougouenheim, of Paris.

Dartmouth Medical College.—Dr. Paul F. Mundé, at the request of the Faculty of Dartmouth Medical College, has consented to deliver the course of lectures on Gynecology at that institution this year, beginning July 13th, to fill the vacancy caused by the death of Dr. Dunster. Dr. William H. Parish, of Philadelphia, will give the course of lectures on Obstetrics.

A New Chest and Throat Dispensary has been inaugurated at 411 Spruce Street, Philadelphia, under the auspices of the Protestant Episcopal City Mission. Drs. F. P. Henry, Thomas J. Mays and William M. Angney are the medical staff of the chest department, and Drs. A. W. Watson and C. Jay Seltzer, that of the throat department.

An Exposition of Aids to Scientific Research.—The *Lancet* of May 12, 1888, writes that a most interesting adjunct to the meeting of German naturalists and physicians, which is to be held at Cologne, from Sept. 18th to the 23d next, will be its exposition of the mechanical aids to research, scientific in general, and medical in particular. In twelve comprehensive groups, every kind of instrument or appliance in surgery, medicine, and practical hygiene will be represented—among the exhibitors being some of the most noted mechanicians in Europe.

An Engraved Portrait of Dr. C. R. Agnew.—At the last meeting of the Ophthalmological and Otological Section of the New York Academy of Medicine, the following motion was made and carried:

"That a committee be appointed, of which the chairman of the Section, Dr. David Webster, be a member, whose duty it shall be to obtain a good photograph of the late Dr. Cornelius R. Agnew, for the purpose of having engravings suitable for framing made from this. The right of issue and sale of such engravings shall be given to some first-class publisher, if practicable; if not, the committee shall offer them to the profession at cost."

In accordance with the above, a committee has been appointed. Members of the profession who desire such an engraving, accompanied by an autograph signature, should send their names and addresses to the Secretary of the Committee, Dr. Charles H. May, 640 Madison Avenue, New York City, at once. When all such names shall have been recorded, those who have requested a copy of the engraving will be notified of the cost of the same, either by the publisher, or by the committee having the matter in charge.

Professor Donders attained on May 27th his seventy-first year, an age at which the Dutch law compels him to resign his professorship in the University of Utrecht. At the festivities with which the occasion was celebrated, a large number of distinguished men, not only from all parts of Holland and the Dutch colonies, but from this and other countries, assembled. An address was presented to Professor Donders, recognizing his forty years'

services to science and humanity. The Professor announced that he desired the memorial fund to be appropriated to assisting young physiologists and ophthalmologists at the University. The King conferred the distinction of Commander of the Golden Lion on Professor Donders, and the Government was represented at the ceremony by the Home Minister. King Humbert sent him the Order of the Crown of Italy, and Sir Joseph Lister congratulated the Professor on behalf of the Royal Society of England. A medal was also struck commemorative of the day's ceremony. Professor Donders declared that, although he was leaving the University, he had not finished his task. A banquet was given to him in the evening.—*British Medical Journal*, June 2, 1888.

Impure Ice.—The danger of an impure ice supply has been the subject of a very thorough investigation by the Massachusetts State Board of Health, which attributes many cases of typhoid fever occurring in cities in autumn to bad water and the results of bad drainage, or none at all, at the summer resorts. The board, therefore, urges upon people who are considering the question where to spend the summer, the importance of selecting places which have proper drainage and pure water supply. In places where ponds are made for the purpose of collecting water for a supply of ice, it is almost certain to be contaminated with sewage, as freezing does not kill, but only conceals, bacteria. A most mysterious case of wholesale poisoning at a summer hotel was finally traced to the impure ice which had been secured from neighboring, shallow ponds. Upon analysis, the melted ice was found to contain, in suspension, a large quantity of decomposed, vegetable matter. The organic matter mostly settled at the bottom of the vessel, but the lighter matter remained diffused through the water. The pond, the source of supply, was examined and found stagnant, and at one end a putrescent mass emitted an intolerably offensive odor. It was reasonably supposed that the ice was the cause of the sickness, and upon its disuse the epidemic abated. Prof. Raphael Pumpelly, who made investigations for the National Board of Health, has no doubt that ice can carry any disease that the water from which it is frozen can convey and that there is even more danger from the ice than there is from the water itself, since sewage is more easily decomposed in summer than in winter. While in cities the greater part of the ice received is pure, in towns where the supply is taken from shallow ponds, both the water and the ice may be a source of danger.—*American Analyst*, June, 1888.

A Prize Awarded.—The Institute of Venice has just awarded the Balbi-Valier prize in Medico-Chirurgical Science, value 6000 francs (\$1200), to Professor Sangalli, of Pavia, for his work, "La Scienza e l'Arte dell' Anatomia Patologica." Dr. Sangalli is the Nestor of Italian anatomists and pathologists, and his essay, full of independent research and original thought, has also a special historical value.

The Death of Dr. Snowden.—DR. JOHN WIEGAND SNOWDEN died at Hamonton, N. J., on May 28, 1888.

Dr. Snowden was born in Philadelphia, April 22, 1823. He was the son of Thomas Snowden, who was, for over thirty years, associated in business with John Wiegand,

as a manufacturer and importer of surgical instruments in Philadelphia.

He was educated at the "Engle" classical school in Philadelphia, assisted Dr. George McClellan as demonstrator of anatomy, and graduated from the Medical Department of the University of Pennsylvania in 1844. He commenced the practice of medicine in his native city, but soon removed to Middletown, Delaware, and thence to Chew's Landing, Camden county, New Jersey. He was of feeble constitution and subject to pulmonary diseases. Learning from the natives that a residence in the barrens of New Jersey, called the "Pines," was a sovereign remedy for these affections, he removed, in 1846, into what was then the centre of that wilderness, near where is now the Angora station on the Camden and Atlantic Railroad. In June, 1849, he joined the Camden County Medical Society, and was at his death the oldest member on its roll. He had filled all the important offices in the Society, having been twice its president, and for nine years chairman of its "Standing Committee," resigning, in 1887, in consequence of ill health. He was a member of the New Jersey State Medical Society, and its president in 1882, a member of the American Medical Association and of the Obstetrical Society of Philadelphia. A few years prior to his death, he removed from Angora to Hammonton, six miles below the former place, and just within the limits of Atlantic County, where he died May 28, 1888.

At a special meeting of the Camden County Medical Society held at Camden, N. J., May 30, 1888, the following was ordered to be placed upon the minutes.

"In the death of Dr. John W. Snowden, who was a member of this Society for thirty-nine years, who rarely was absent from its meetings, who filled its highest posts of honor, maintained its dignity, and used his rich fund of experience and ripe judgment in the interest of harmony, this Society has sustained a great loss."

"We commend to the members of the Society this bright example of the true physician, one who, for forty years, by night and by day, in sunshine and in storm, devoted talents, worthy of a more brilliant theatre, to the people of a sparsely settled district, and ministered with great medical skill to alleviate their sickness and sufferings; and often with true Christian piety, furnished them with spiritual consolation."

"We extend to his bereaved family our sincere sympathy in their sorrow and loss, knowing that, although his place cannot be filled, their and our remembrance of him will be of one who, in all his relations in life, both public and private, was the embodiment of purity, honor and dignity."

OFFICIAL LIST OF CHANGES IN THE STATIONS AND DUTIES OF THE MEDICAL CORPS OF THE U. S. NAVY, FOR THE WEEK ENDING JUNE 9, 1888.

MAGRUDER, A. F., *Surgeon*.—Detached from the "Yantic" and granted sick leave.

BATES, N. L., *Medical Inspector*.—Ordered to the "Richmond."

KIDDER, B. F., *Medical Inspector*.—Detached from the "Richmond," and waiting orders.

MACKIE, B. F., *Surgeon*.—Detached from the Naval Examining Board preparatory to sea service.

HEYL, T. C., *Surgeon*.—Ordered to the Receiving Ship "St. Louis."

STREETS, T. H., *Surgeon*.—Detached from the "St. Louis," and ordered to the Medical Examining Board as Recorder.

DUBOISE, W. R., *Passed Assistant Surgeon*.—Detached from the Naval Hospital at Norfolk, and ordered to the "Jamestown."

WELLS, HOWARD, *Passed Assistant Surgeon*.—Detached from the "Jamestown," and ordered to the Hospital at Chelsea.

OFFICIAL LIST OF CHANGES OF STATIONS AND DUTIES OF MEDICAL OFFICERS OF THE U. S. MARINE-HOSPITAL SERVICE, FOR THE WEEK ENDING JUNE 9, 1888.

BAILHACHE, P. H., *Surgeon*.—Detailed as Chairman of the Board of Examiners, to meet in Washington, June 25, 1888. June 8, 1888.

FESSENDEN, G. S. D., *Surgeon*.—Detailed as a member of the Board of Examiners, to meet in Washington, June 25, 1888. June 8, 1888.

PURVIANCE, GEORGE, *Surgeon*.—Detailed as Recorder of the Board of Examiners, to meet in Washington, June 25, 1888. June 8, 1888.

OFFICIAL LIST OF CHANGES IN THE STATIONS AND DUTIES OF OFFICERS SERVING IN THE MEDICAL DEPARTMENT, U. S. ARMY, FROM MAY 29 TO JUNE 11, 1888.

WHITE, ROBERT H., *Major and Surgeon*.—Will report to the regimental commander, First Infantry, to accompany Headquarters, Field, Staff, Band and Battalion of the First Infantry to Santa Barbara, Cal., on or about June 15, 1888, to remain until about September 1, 1888.—S. O. 25, *Division of the Pacific*, May 28, 1888.

APPEL, D. M., *Captain and Assistant Surgeon*.—Upon the arrival of Captain J. V. Lauderdale, Assistant Surgeon, at Fort Davis, will proceed to Camp Pena Colorado, Texas, for temporary duty at that camp; and upon the return of First Lieutenant H. S. T. Harris, Assistant Surgeon, to Camp Pena Colorado, Assistant Surgeon Appel will return to Fort Davis.—S. O. 57, *Department of Texas*, May 28, 1888.

KEAN, J. R., *First Lieutenant and Assistant Surgeon*.—Will accompany Troop C, Ninth Cavalry, from Fort Robinson, Nebraska, to Fort Du Chesne, Utah, and return with Troop B, Ninth Cavalry, to Fort Robinson.—S. O. 39, *Department of the Platte*, May 19, 1888.

MORRIS, E. R., *First Lieutenant and Assistant Surgeon*.—Granted leave of absence for one month, with permission to apply for an extension of one month.—S. O. 61, *Department of Arizona*, May 28, 1888.

FINLEY, JAMES A., *Captain and Assistant Surgeon*.—Granted leave of absence for six months, on surgeon's certificate of disability, with permission to leave the Division of the Missouri.—S. O. 129, A. G. O., June 5, 1888.

BENHAM, ROBERT B., *Captain and Assistant Surgeon*.—Is relieved from duty at Fort Du Chesne, Utah, to take effect upon completion of the duty assigned him in par. 2, S. O. 33, c. s., Department of the Platte, and will then proceed to Fort Laramie, Wyoming, reporting to the commanding officer for duty at that post.—S. O. 44, *Department of the Platte*, June 4, 1888.

PILCHER, JAMES E., *First Lieutenant and Assistant Surgeon*.—Detailed as a member of a Board of medical officers appointed by S. O. 108, A. G. O., May 10, 1888, to meet at the U. S. Military Academy, West Point, N. Y., to examine candidates for admission to the Academy, etc., vice Major Robert M. O'Reilly, Surgeon, relieved.—S. O. 128, A. G. O., June 4, 1888.

CHERBONNIER, A. V., *Captain and Medical Storekeeper*.—Granted leave of absence for four months, on surgeon's certificate of disability.—S. O. 133, A. G. O., June 9, 1888.

THE MEDICAL NEWS will be pleased to receive early intelligence of local events of general medical interest, or of matters which it is desirable to bring to the notice of the profession.

Local papers containing reports or news items should be marked. Letters, whether written for publication or private information, must be authenticated by the names and addresses of their writers—of course not necessarily for publication.

All communications relating to the editorial department of the NEWS should be addressed to No. 1004 Walnut Street, Philadelphia.